

# SMITHSONIAN ZOOLOGICAL

SUMMER 2018



## Trunk Show

**Celebrating 60 years  
of FONZ support  
for Asian elephants**

- » **Fighting for Frogs**
- » **Animal Enrichment  
is Serious Fun**
- » **For Kids: Cool Activities  
for Hot Days**

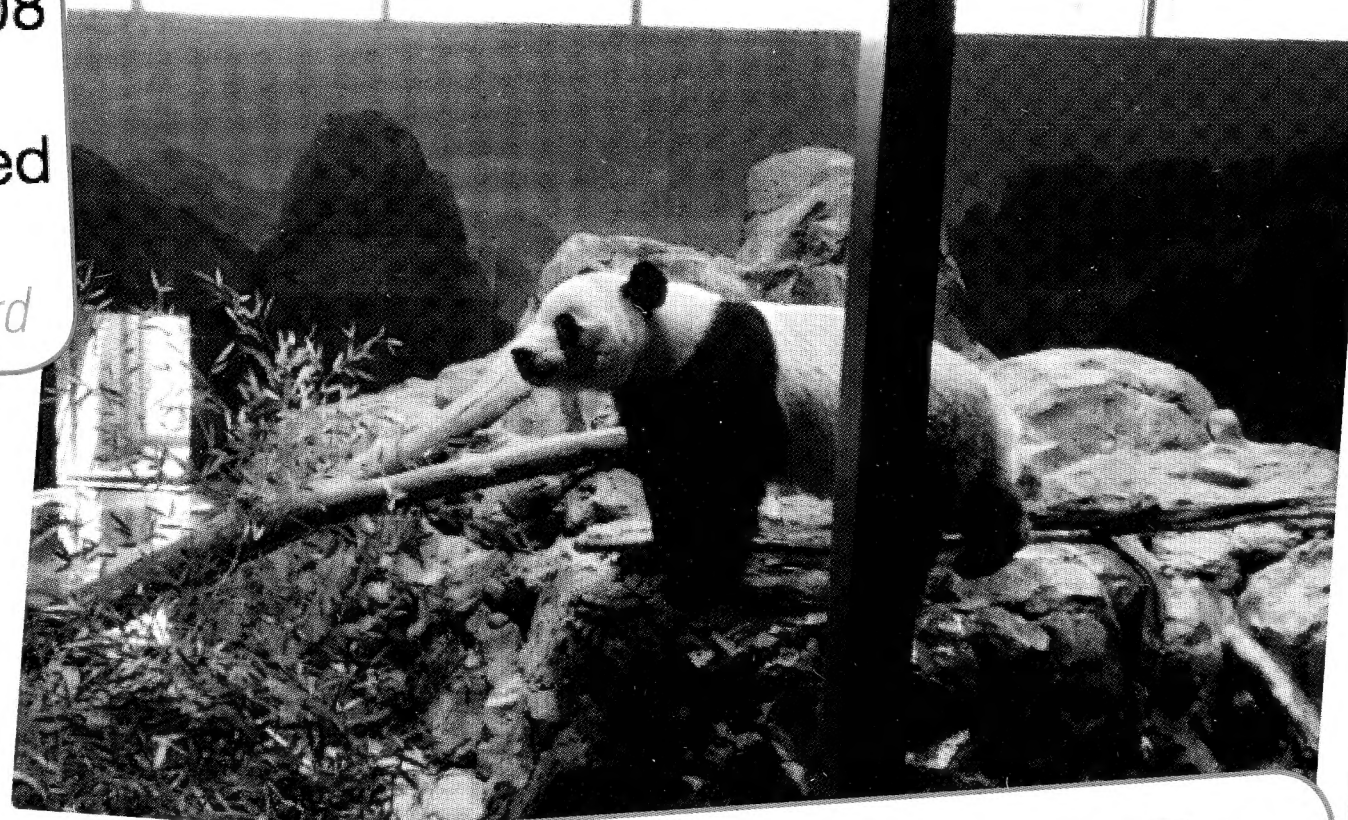




~@zoos\_aquariums

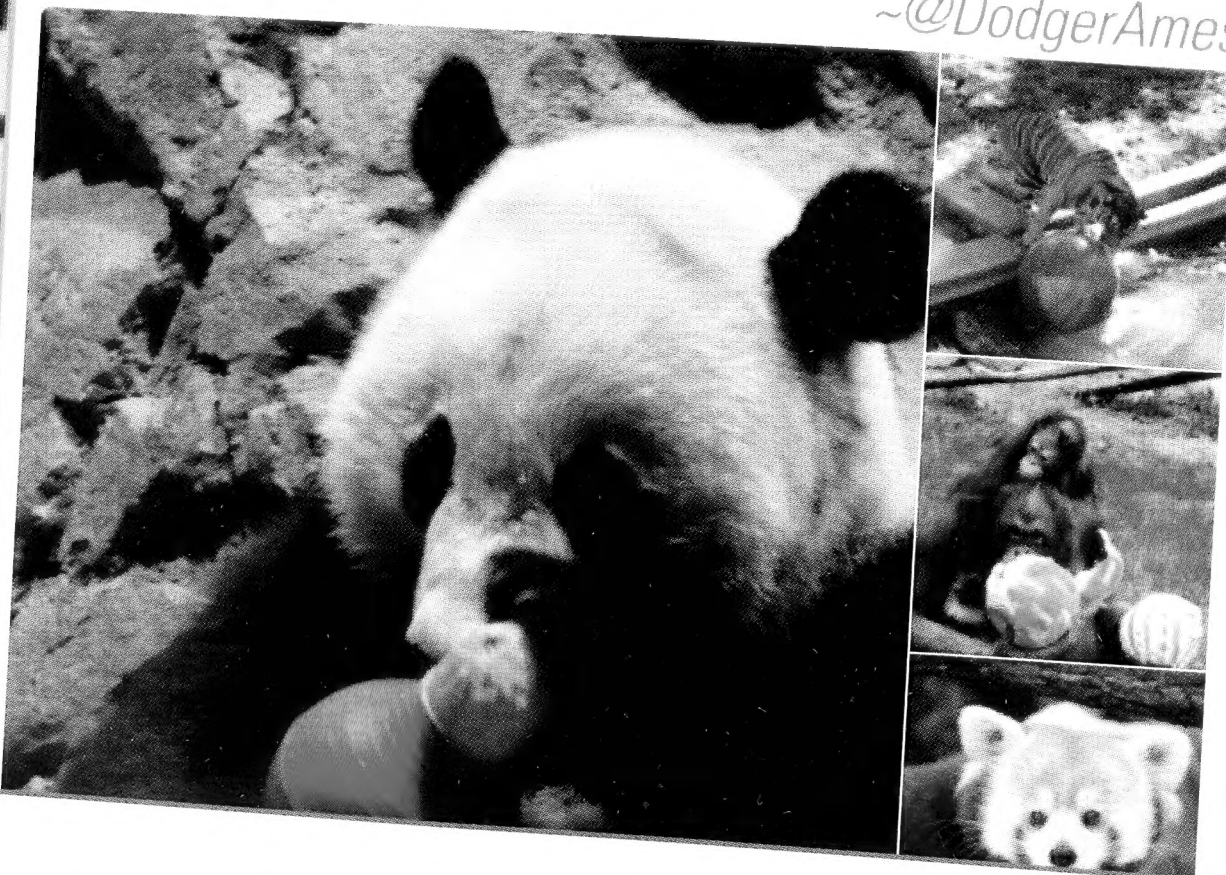
Wonderful photos and well said!  
Proud to be a member! (This is  
@houseofcubs with his "proud to be a part of  
it" stance)  
~@CharmCityPanda

9:41 AM - 10 Apr 2018



From preschool playdates to #BooAtTheZoo, #ZooLights, field trips, summer camps & more, we are proud to be a #FONZfamily! Happy 60th, @FONZNationalZoo! ~@melanietc

~@DodgerAmes



## SHARE YOUR STORIES!

   @FONZNATIONALZOO #WeAreFONZ



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**FEATURES**

JESSIE COHEN/NZP

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**BY VALERIE MAY AND GEORGE STUTEVILLE**

A deadly skin disease has ravaged amphibians worldwide, but Smithsonian scientists are working to conserve species in human care, and there are early signs of a recovery in the wild as well.



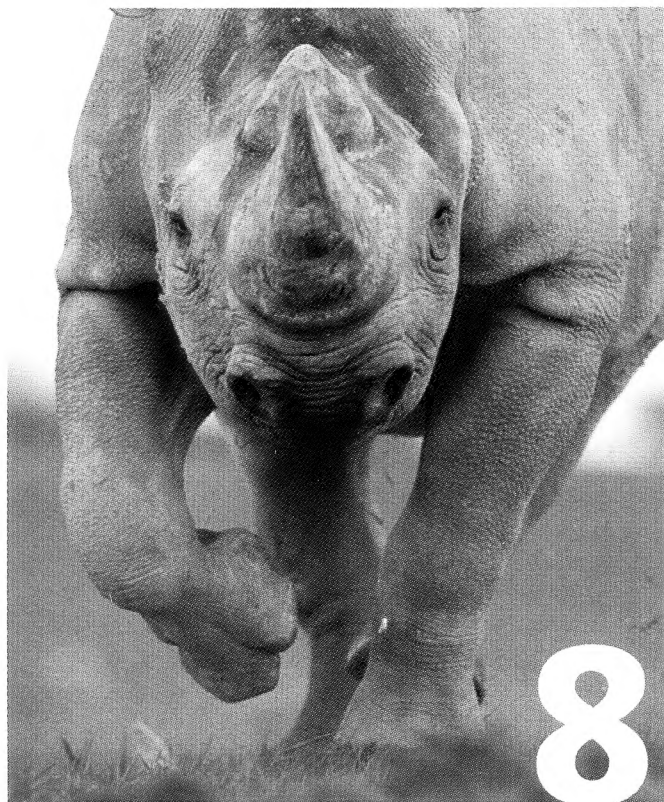


SUMMER 2018

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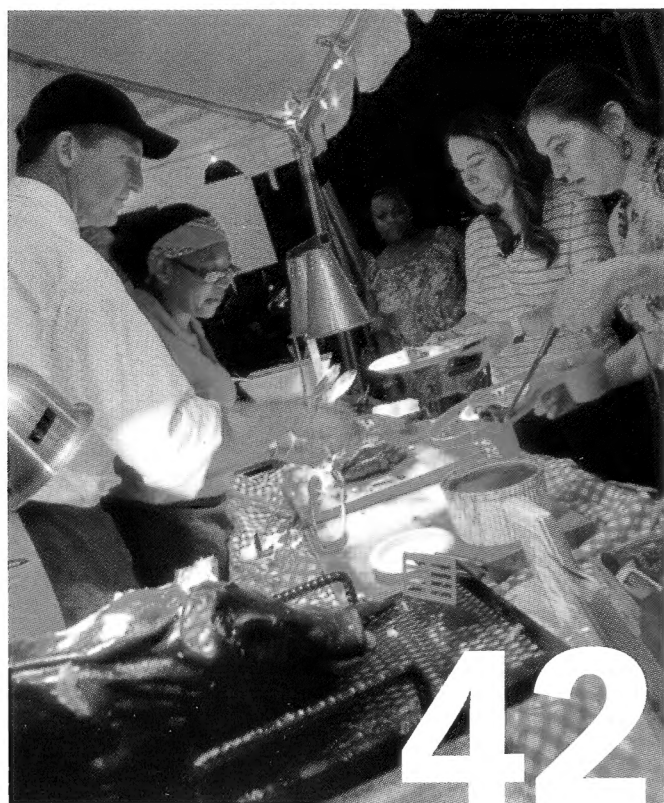
Cool kid activities for hot days.

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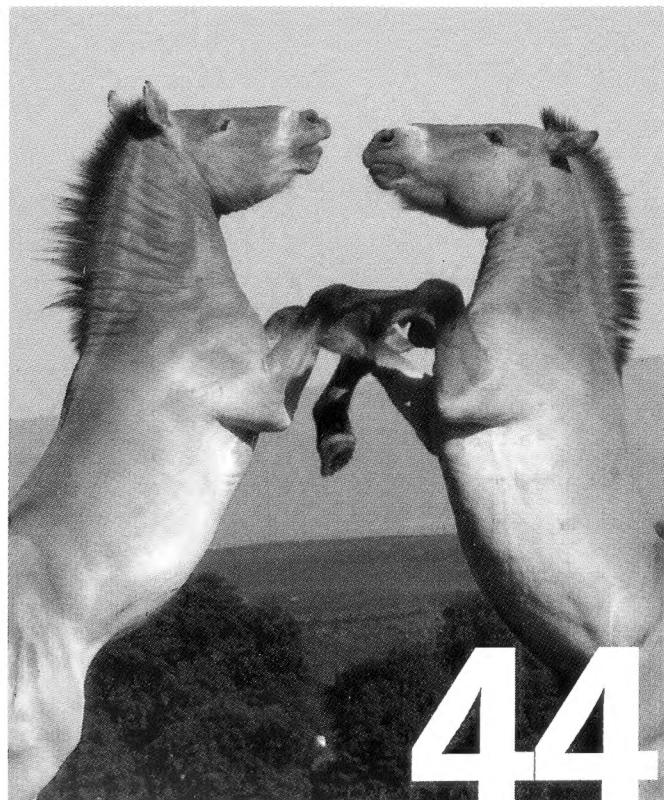
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An SCBI keeper gets a striking image of two male Przewalski's horses mock-fighting.



JOHN THOMAS CONSOLI/FONZ

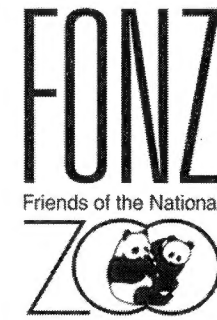
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LAWRENCE LAYMAN/NZP

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# SMITHSONIAN Zoogoer



The Friends of the National Zoo helps the Smithsonian's National Zoo and Conservation Biology Institute save species by raising funds to support their mission, providing educational and fun experiences, and inspiring our members and guests.

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**Smithsonian National Zoological Park** is located at 3001 Connecticut Ave., N.W., Washington, D.C., 20008-2537. Weather permitting, the Zoo is open every day except December 25. For hours and other information on visiting the Zoo, go to [nationalzoo.si.edu](http://nationalzoo.si.edu).

**Membership** in FONZ supports the animal care, conservation, and educational work of the Smithsonian's National Zoo and Conservation Biology Institute. It also offers many benefits: a *Smithsonian Zoogoer* subscription, discounts on shopping and events, discounted or free parking, and invitations to special programs and activities. To join, call 202.633.2922, or visit [fonz.org/join](http://fonz.org/join).

### Membership categories

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Premier Plus .....	\$114
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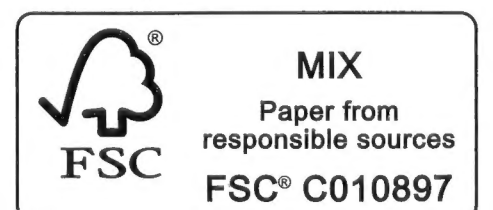
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**On the cover:** Spike, the Zoo's new Asian elephant.  
 PHOTO BY JANICE SVEDA

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## A FONZ MISSION: EDUCATION AND INSPIRATION

**I love seeing those adorable, green-baseball-cap-wearing Summer Safari campers in the Zoo every year.** They're completely engaged in learning about animals and the environment. The smiles on their faces are the result of a ton of hard work by the FONZ education department.

We run education programs that have a fee (but with a nice discount and exclusive early sign-up access for members!), like that Summer Safari camp, along with education programs that are free for all. We have over a dozen full-time, highly qualified educators on our team, many more part-time teachers, and about 1,250 wonderful volunteers. They're busy hosting children's classes, educational birthday parties, overnight sleepovers, camps, school programs, science fair events, home-school programs, Zoo and SCBI tours—and engaging our guests,

running the volunteer programs, and putting on public events. They're educating more than 8,000 people annually through our paid programs and, with our volunteers, interacting with over 700,000 Zoo visitors, plus supporting animal keepers behind the scenes with everything from keeping the habitats clean to operating the beloved "panda cam."

But that's not enough for these enthusiastic educators. They're also creating public school curricula about migratory birds and reaching out to schools and families in low-income communities, with the help of sponsors like Geico and PNC.

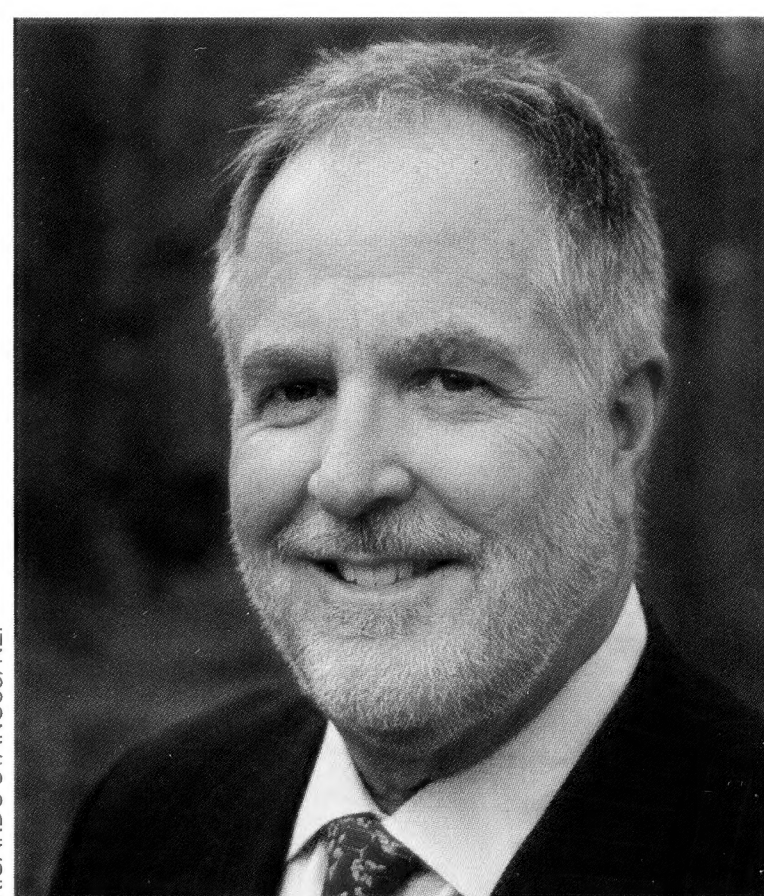
The FONZ education teams are our key to helping raise the next generation of conservationists—and ultimately helping save species. I can't think of anything more rewarding than that, and I can't think of a better group of educators for the job.



COURTNEY SMITH/FONZ

Lynn Mento, Executive Director  
Friends of the National Zoo

## AMBASSADOR FOR AN URGENT CAUSE



RICARDO STANOS/NZP

Steven L. Monfort, Acting Director  
Smithsonian National  
Zoological Park

**The Zoo's newest Asian elephant, a male named Spike, is settling in well.** At about 14,000 pounds, he's the biggest elephant at the Zoo, and our hope is that he'll breed with our youngest female elephant, Maharani.

Like all the Zoo's elephants, Spike is an ambassador for an urgent cause. Asian elephants are threatened by extinction in nearly every habitat they live in. Fewer than 50,000 Asian elephants remain in the wild. Smithsonian Conservation Biology Institute (SCBI) scientists have been working with local elephant teams and experts in Myanmar to understand—and help reduce—the threats elephants face.

Technology is the key to tracking these elusive creatures in the dense jungles of Myanmar, where fewer than 2,000 elephants remain. Our team from the Conservation

Ecology Center uses satellite collars to track the movement of elephants, allowing them to see how elephants are exposed to poaching and conflict with farmers. What they've discovered is troubling. In the past, poachers mostly went after males for ivory; today, males, females, and calves are increasingly being poached for their skin. That severely reduces reproduction and leads to rapid population decline and extinction. The Zoo provides resources to help stop poaching, teach local communities how to reduce conflict with elephants, and collar elephants to track their movements and survival. That work is a critical step to save this species from extinction.

World Elephant Day is August 12. Come and see Spike, be inspired by these amazing animals, and learn how you can help save Asian elephants.

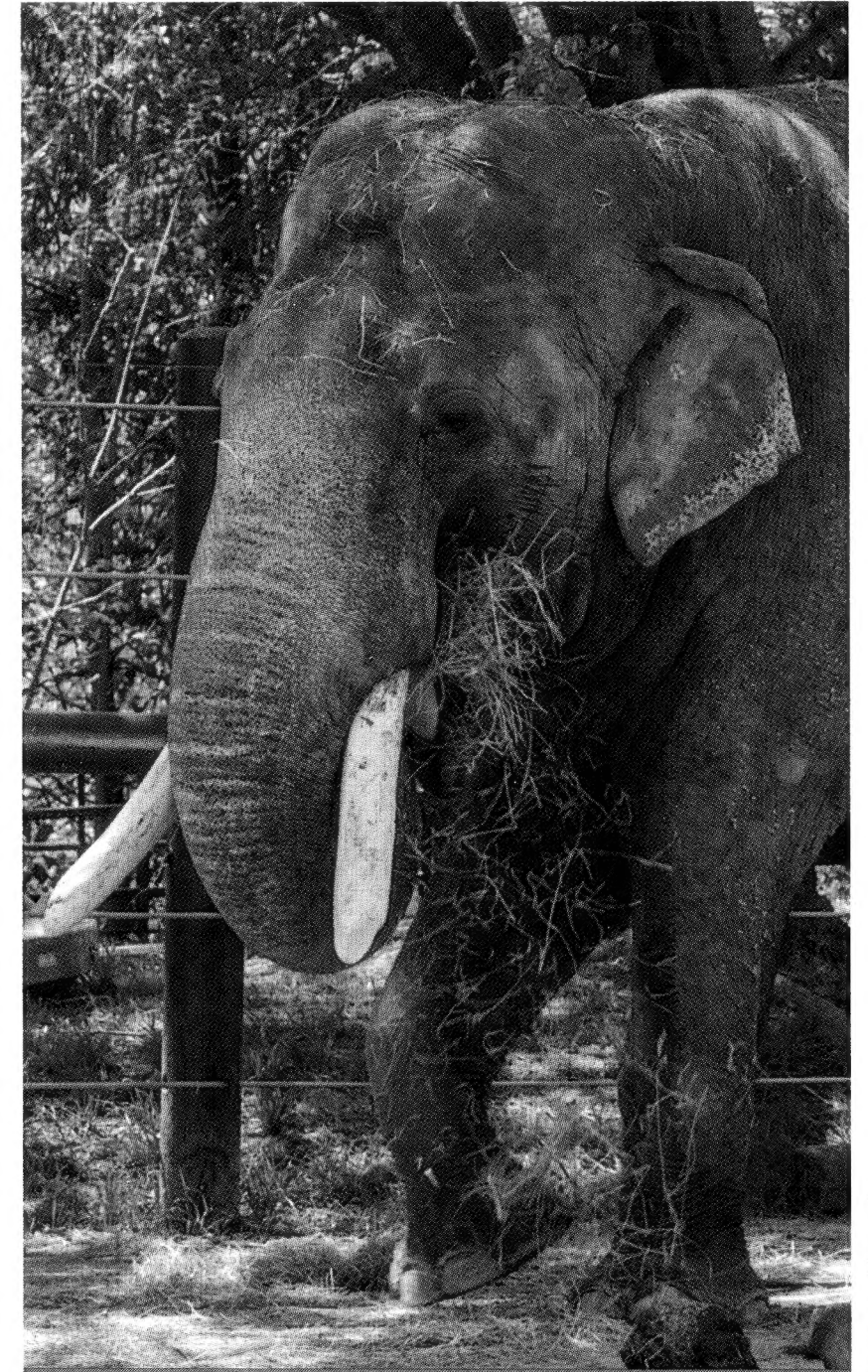


# Summer

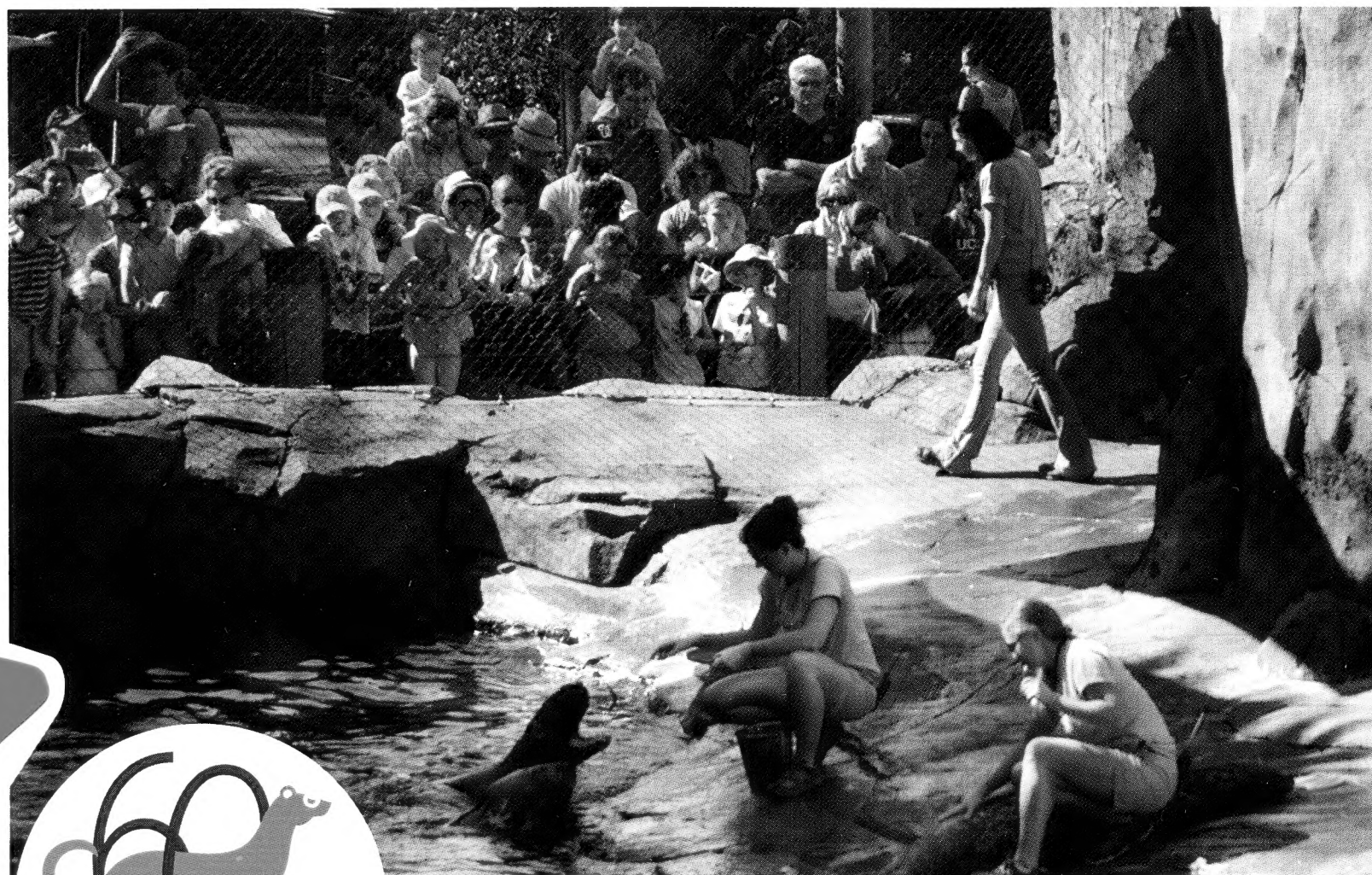
## Highlights at the Zoo

### Mighty Spike | ELEPHANT TRAILS

New at the Zoo: Spike, a 36-year-old male Asian elephant. He's here as part of a breeding recommendation with his old friend Maharani. (They know each other from their time together at a previous zoo.) [fonz.org/spike](http://fonz.org/spike)



JANICE SVEDA/NZP



JIM JENKINS/NZP



### 60th Anniversary Member Celebration | JUNE 30

Help celebrate 60 years of conservation success, backed by the members of FONZ! The party's at American Trail, with exclusive access to animal demonstrations. Members can also get a rare glimpse of the Research Hill facility, where much of the Zoo and SCBI's behind-the-scenes work takes place.

[fonz.org/june-member-celebration](http://fonz.org/june-member-celebration)



ROSHAN PATEL/NZP

### Moke and Mom | GREAT APE HOUSE

What's cuter than a months-old gorilla? Nothing! Come meet Moke, a western lowland gorilla born at the Zoo in April. Moke's current agenda: lots of bonding with mom, Calaya. [fonz.org/moke](http://fonz.org/moke)



### Brew at the Zoo | JULY 19

Drink beer, save wildlife! Get unlimited tastings from more than 70 breweries, grub from popular food trucks, animal experiences, live music, and more. Proceeds benefit Zoo and SCBI conservation programs. [fonz.org/brew-zoo](http://fonz.org/brew-zoo)



CLARISSA VILLONDO/FONZ

### Enrichment Day | AUGUST 25

Fun for animals, fun for visitors. At the Zoo's annual enrichment day, you can watch training and enrichment activities, attend demonstrations, and talk to keepers about how they keep Zoo animals engaged and healthy. [fonz.org/enrichment-day](http://fonz.org/enrichment-day)



CHRISTOPHER WELLNER/NZP



ERIN SCOTT/FONZ

### Zoo Uncorked | SEPTEMBER 13

It's the wildest wine tasting in town. Get unlimited tastings from local and national wineries, along with live music and entertainment. Some exhibits will be open late for attendees. [fonz.org/zoo-uncorked](http://fonz.org/zoo-uncorked)



JESSIE COHEN/NZP

### Round Up for Conservation | ZOO SHOPS

Want to save species? Start shopping. Purchases at Zoo gift shops support the Zoo's mission. And if you round up your amount to the next dollar, the extra funds are used specifically for conservation projects at the Zoo and in the wild. Shoppers have raised more than \$325,000 so far! [nationalzoo.si.edu/support/round-for-conservation](http://nationalzoo.si.edu/support/round-for-conservation)





## WELCOME, SPIKE!

The Zoo's new male Asian elephant, Spike, is settling in nicely. Spike came from Busch Gardens Tampa Bay as part of a Species Survival Plan breeding recommendation from the Association of Zoos and Aquariums. Ultimately, the Zoo staff hopes that he'll breed with Maharani (whom Spike knows from their time together at the Calgary Zoo). Spike weighs 14,220 pounds, making him the biggest animal at the Zoo. **You can see Spike at Elephant Trails.**

## It's a Stick. No, It's a Snake!

Look closely on your next trip to the Reptile Discovery Center and you may see three tentacled snakes. These aquatic snakes are the color of tree bark and are extremely stealthy, spending most of their time waiting motionless for prey to approach. They don't have real tentacles—just two appendages that look like a handlebar mustache.





ROSHAN PATLE/NZP

## Backpacks on Brown Pelicans

Last summer, Smithsonian Migratory Bird Center research ecologist Autumn-Lynn Harrison started tracking brown pelicans in the Chesapeake Bay area to learn more about how the species is doing in that habitat. Using funds donated by FONZ through Conservation Nation, Harrison designed a kind of backpack made of Teflon ribbons and used it to put solar-powered GPS tags on six brown pelicans. (The tags don't interfere with any of the birds' movements.) Brown pelicans nearly went extinct due to DDT, but the species is recovering and currently has a stable population on the Chesapeake. Harrison's research is showing how the birds migrate and feed, filling in critical gaps in our knowledge. **You can see the Zoo's brown pelicans — Pappy, Scout, and Huey — at American Trail.**



ROSHAN PATLE/NZP

## Mountain Gorillas Get a Housecall

Mountain gorillas are critically endangered in the wild, but a dedicated group of conservationists, including wildlife veterinarians, provides care to this species through an organization called Gorilla Doctors. In late 2017, Dr. Dawn Zimmerman, a wildlife veterinarian with the Smithsonian Conservation Biology Institute's Global Health Program, traveled to

Rwanda and worked with Gorilla Doctors for three weeks. Mountain gorillas are threatened by poachers and human-borne diseases. There are fewer than 1,000 left in the wild, but thanks to Gorilla Doctors, the population is growing. While in Africa, Zimmerman saw a

male that she had rescued from a snare four years ago. He had a rope so tight around his wrist that he could no longer use his hand. Without intervention, he would have lost his hand from lack of blood supply and possibly his life due to infection. Zimmerman helped remove the snare and treated the male's infections, and on this trip, she was happy to see that he was thriving.

**Learn more at [gorilladoctors.org](http://gorilladoctors.org).**



JENNIFER ZOON/NZP



DAWN ZIMMERMAN/NZP

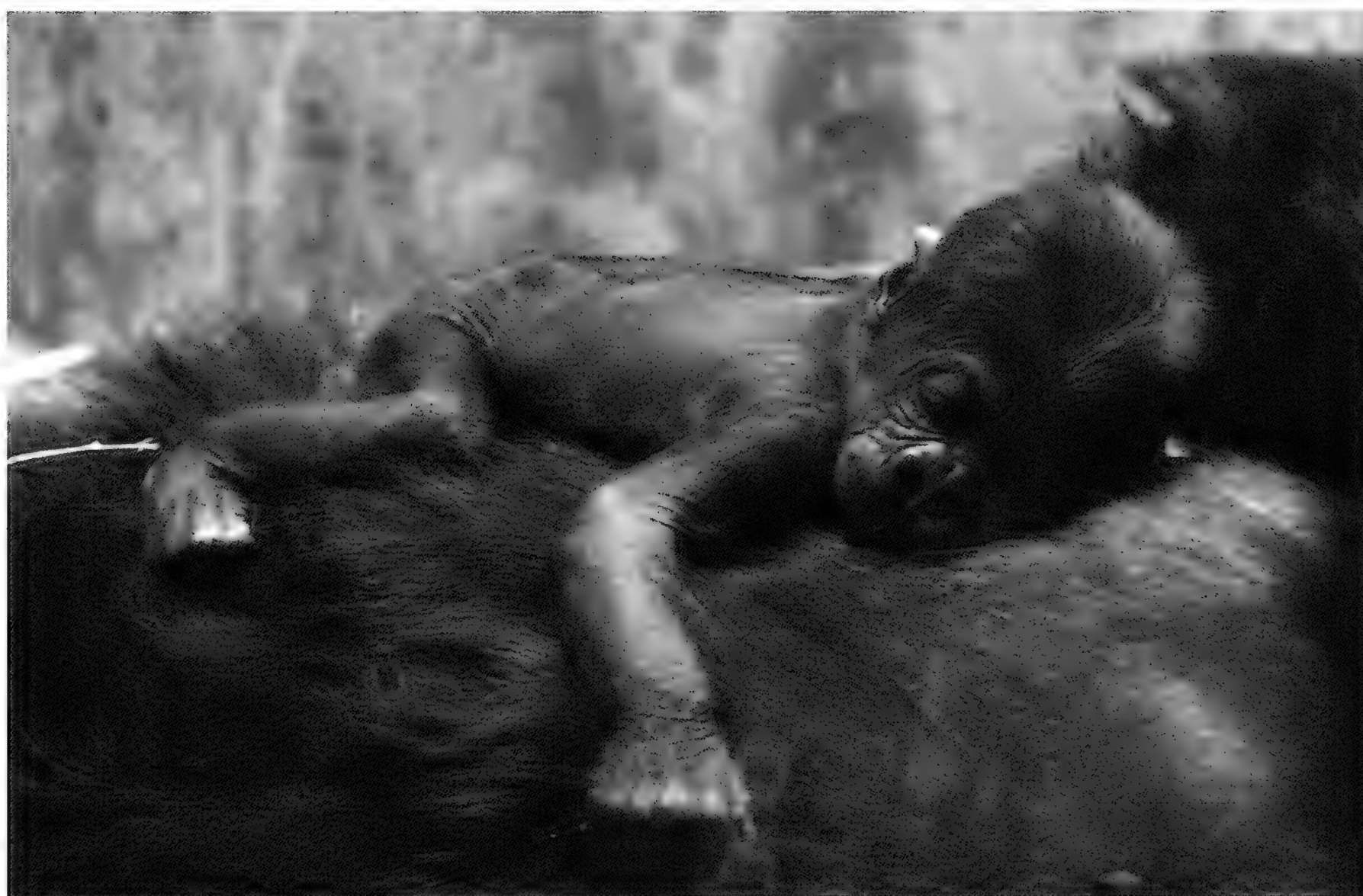


## A DNA Database for Rhinos

SCBI researchers are working to save both black and white rhinos by creating a database of their DNA. There are only about 5,000 black rhinos left in the wild (and about 20,000 white rhinos), and the species is critically endangered. Roughly 1,000 rhinos are poached each year, primarily for their horns, which are used in traditional medicine in some Asian countries but do not have any medicinal properties. The black rhino population has decreased by almost 98 percent since 1960. In response, researchers created a database of 20,000 samples from horns, carcasses, and blood; those samples can be linked to poached animals in the future and help prosecute the people responsible. So far, nine poachers have been prosecuted and convicted using the database. (A similar database prevents elephant poaching by ivory hunters.) A priority Conservation Nation program in 2018 provides healthcare to sick, injured, or orphaned rhinos. **Learn more and donate at [conservationnation.org](https://conservationnation.org).**







JENNY BOTTING/NZP

## Newborn Gorilla

In mid-April, the Zoo welcomed Moke ("Mo-KEY"), a baby western lowland gorilla. Moke, whose name means "little one" in the Lingala language, is the first gorilla born at the Zoo in nine years. His

parents, Calaya and Baraka, bred in 2017 on a recommendation from the Association of Zoos and Aquariums' Species Survival Plan (SSP). Western lowland gorillas are critically endangered in the wild. **You can see the Zoo's gorillas at the Great Ape House.**



ROSHAN PATLE/NZP

## Bear Pair

The Zoo's new male sloth bear, Niko, is settling into his new home and getting to know Remi, the Zoo's female sloth bear. Niko came from NaturZoo Rheine in Germany in late 2017, on a breeding recommendation of the Association of Zoos and Aquariums' Species Survival Plan (SSP). It may take time, however—Niko and Remi are sexually mature at three and four years old, respectively, but in human years, they

would be in their early teens. In the meantime, Niko is developing a reputation as a big goofball. Keepers have seen him lying on his back while kicking a bouncy hanging toy with his feet, and even placing a traffic cone over his head and walking around on his hind legs. **See Niko and Remi at Asia Trail.**





## KEEPERS AT WORK: AMAZONIA

Ever wonder what it's like to work at the Zoo? Here's a day in the life of a keeper at the Amazonia exhibit.

JENNIFER ZOON/NZP

### TRAINING A TITI MONKEY

Keepers train the Zoo's male titi monkey, Henderson, to come to a designated spot voluntarily, so they can ensure that he's healthy. Twice a day, they show him a target stick with a blue ball on the end. When he touches his nose to the ball, he gets a treat: peanuts, grapes, or a strawberry.

### BREAKFAST TIME

Every morning, keepers hit a wood block five times—a signal to the 13 free-flight birds in Amazonia that breakfast is served. The goal is to get them comfortable with coming to an enclosure if a vet needs to check on one of them.

### A PACU CHECKUP

Sometimes the staff needs to conduct an exam or perform surgery on one of the fish in Amazonia. To do so, they put an anesthetic in the water. Periodically they'll check the cholesterol levels of the pacu, a fish that can grow to three feet long and 65 pounds.

## THE Z LIST

# It's Easy Being Green

In 2001, the Zoo and FONZ staff formed a Sustainability Committee—aka, the “green team”—to improve environmental sustainability at both the Zoo and SCBI. Today, signs of that program are all around, from the 150-plus blue recycling bins to the solar-powered carousel. Here are some highlights from the program.

4

Number of LEED-certified buildings, including the Elephant Community Center, the Seal and Sea Lion building, the soon-to-be-completed Conservation Pavilion, and a science center at the Smithsonian-Mason School of Conservation out at SCBI.

9

Tons of cooking grease recycled for use as biofuel from Zoo restaurants.

150,949

Plastic water bottles not used by Zoo visitors, staff, and volunteers, thanks to the free water-bottle fill-up stations at the Zoo's Visitor Center, Mane Restaurant, and General Services Building.

1,864

Number of solar panels on the grounds of the Zoo and SCBI.

657,685

Number of kilowatt-hours of electricity generated by those panels in 2017, enough to power about 650 homes for a year.

1,725,600

Pounds of compost produced from food and organic waste collected at the Zoo and SCBI.

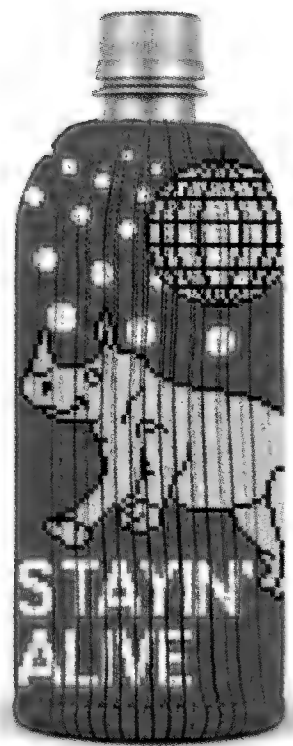
131,880

Pounds of paper, metal, plastic, and glass recycled by Zoo staff and visitors in 2017.



MEGHAN MURPHY/NZP





## dry hands

A monthly gift of \$10 gets you  
a Conservation Nation Freaker



## warm feet

A monthly gift of \$15 gets you  
Conservation Nation Freaker Feet



## full heart

Receive both a Freaker and Freaker Feet  
for a monthly gift of \$20 or more

**\$10 a month over one year (33¢ per day) can fund two penguin nest boxes!** Giving a small amount every month can add up in a big way—like providing a safe place for African penguins to nest or delivering quality healthcare to critically endangered rhinos. When you join Conservation Nation as a monthly donor, you provide a consistent and reliable source of funding that can help erase extinction around the world. **Sign up today!**

CONSERVATION  
NATION   
[conservationnation.org](http://conservationnation.org)



# Elise Bernardoni

Assistant Director  
for Education Programs

## **Q: What do you do at the Zoo?**

**A:** My team manages all the education programs that require advance registration. That includes things like children's classes, adult classes, all of the Safari day camps, birthday parties, Snore & Roar and Scout Snooze overnights, and all of our on-site school programs and home-school programs. Last year, across all programs, we had over 8,000 participants. There are only six of us on the team, and I like to say that we're small but mighty.

## **Q: How does your work help save species?**

**A:** I think education is critically important to saving species. In the Zoo's current five-year strategic plan, one of the goals is to raise the next generation of conservation scientists. We're part of that. We want all our guests to fall in love with animals, to be inquisitive about the natural world, and to make environmentally friendly choices in their daily lives. Learning about animals and the environment—and the challenges we all face in protecting them—hopefully sparks people's passion and motivates them to become advocates and conservationists for the environment.

## **Q: How did you wind up working at the Zoo?**

**A:** I've always loved animals. I wanted to be a marine biologist when I was a kid. Later, I got a master's degree in museum education from George Washington University. A requirement of that program was that I take an internship, and I begged my supervisor to allow me to come to the Zoo. She really thought I should be at the National Gallery of Art or another traditional museum. But she ultimately gave in. At the end of my internship here at the Zoo, I told my boss I was just going to keep coming to work until she found me a job, and she did. That was 12 years ago, and I'm still here.



COURTNEY SMITH/FONZ

## **Q: What's the best part of your job?**

**A:** I love working for an organization that genuinely makes a positive difference in the world. And our mission to save species is so important, especially right now. Plus, I get to see animals every day! If I'm having a bad day, I can go outside and see the cheetahs and be reminded of the important work we're doing and why I'm here.

The other thing that's special about working here is the people. My team is amazing. The passion, creativity, and intelligence, on both the FONZ side and the Zoo side, is just really inspiring. It's fun to come to work every day.





**Q** What's the most challenging part of your job?

**A** It's nonstop. We never slow down. Creating these education experiences so that they're meaningful to participants requires a lot of planning and attention to detail. We have to wear a lot of hats, be flexible and creative, and think on our feet. It's a challenge, but it's also super fun.

COURTNEY SMITH/FONZ

COURTNEY SMITH/FONZ

**Q:** What's the coolest or strangest thing you've learned working at the Zoo?

**A:** This is the hardest question to ask an educator, because we're learning all the time! But I'm fascinated by naked mole rats. Everything about them is cool and strange. They're the only mammal that has a queen and a colony (like ants and bees). They're cancer-resistant, and they live more than 30 years, which is 10 times longer than mice or rats. And kids love that they roll in their own poop. But they do it for a good reason—so they can identify each other by smell, because they're essentially blind.

**Q:** If you could tell Zoogoer readers one thing, what would that be?

**A:** I'd say that their support of accredited zoos and aquariums is so incredibly important. They're supporting a community that is dedicated to saving species and preserving wild spaces. We really can't do our work without FONZ members, and I'd like to thank them for visiting and for sharing Zoo stories and conservation stories with their friends and family and advocating for us.





# SERIOUS fun

BY CRISTINA SANTIESTEVEAN

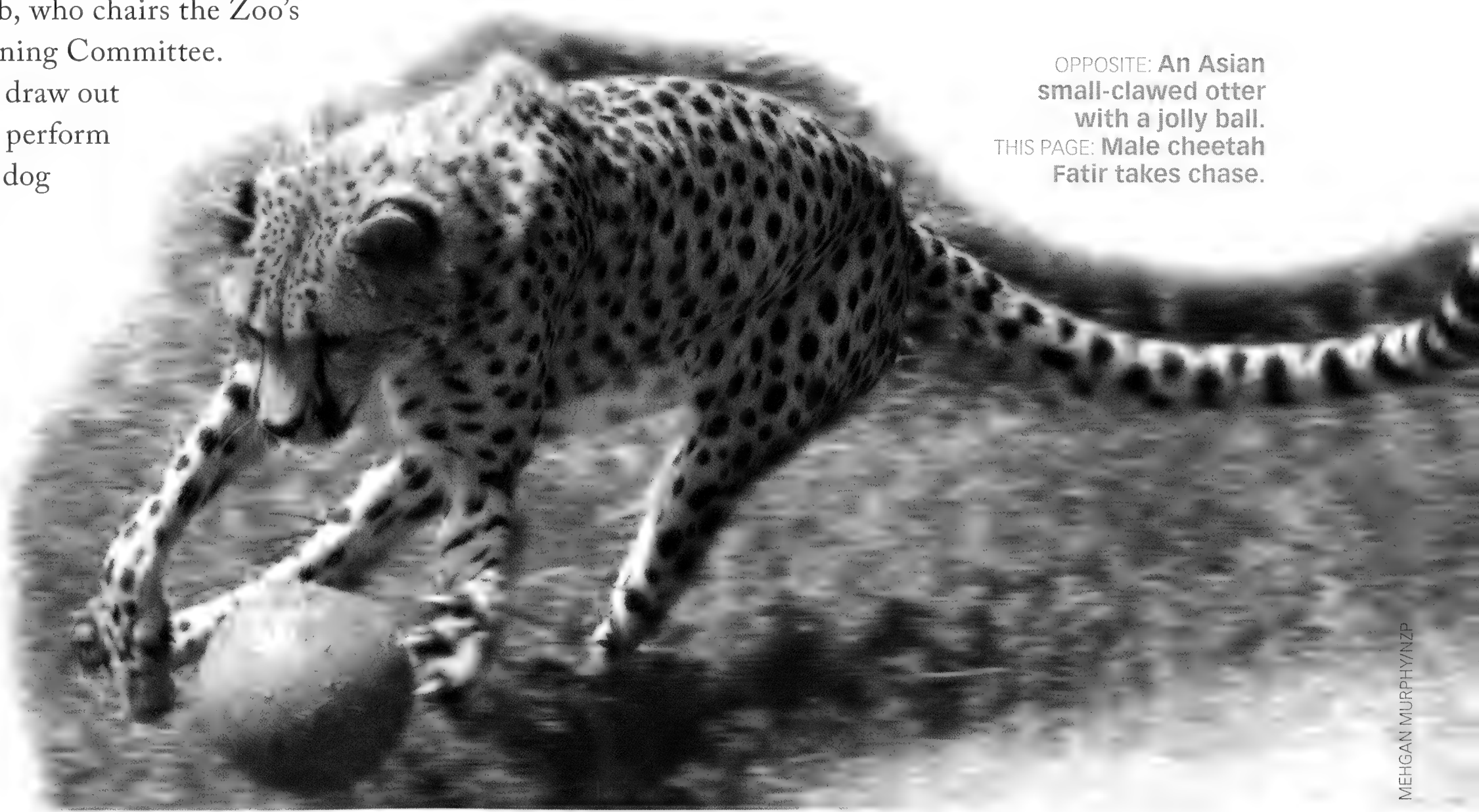


Throw a ball for your dog.  
Pull a toy mouse on a string for your cat.  
Give your hamster a wheel.  
That's animal enrichment.  
It's important, it's fun, and it's an essential part  
of the animal care at the Smithsonian's National Zoo  
and Conservation Biology Institute.

**Y**ou may not see a resemblance between your rescue mutt at home and one of the Zoo's gray wolves, but the similarities show up when the animals start to play. "There's really not a whole lot of difference between enriching a Zoo animal and enriching your pet," says American Trail animal keeper Chelsea Grubb, who chairs the Zoo's Enrichment and Training Committee. "Pet toys are made to draw out behaviors they would perform in the wild, such as a dog chewing on a bone or a cat 'hunting' a toy mouse. These are the same goals we have for Zoo animals, so they have well-rounded and fulfilling lives."

Animal enrichment can be fun. In fact, it often is—for both the animals and any lucky Zoo visitors who happen upon an enrichment

activity in progress. But despite appearances, fun is not the primary goal. Certainly the Zoo's keepers and curators want the animals to have a good time. But the real goal is for the animals to be able to act as much like their true wild selves as possible. This is serious fun—fun with a purpose.



OPPOSITE: An Asian small-clawed otter with a jolly ball.  
THIS PAGE: Male cheetah Fatir takes chase.

MEGHAN MURPHY/NZP

MEGHAN MURPHY/NZP



## Virtually every animal at the Zoo receives some form of enrichment activity.

Tigers and lions wrestling barrels and balls use the same muscles and instincts they would to bring down prey in their native forests and plains. A mongoose chasing bubbles is as alert and curious as a wild counterpart pursuing insects. River otters scooping goldfish from a water jug employ the same problem-solving skills that would help them thrive in their natural environments.

“Enrichment is anything that provides stimulation and encourages animals to display species-appropriate behaviors like they would in their wild environments,” says Grubb. Food is a popular enrichment item, but the Zoo’s keepers also use sounds, smells, physical objects, puzzles and other mental challenges, and more to keep their animals active, engaged, and healthy.

Virtually every animal at the Zoo receives some form of enrichment activity. With some animals, these activities are easy to recognize. Small mammals are offered treats hidden in paper towel tubes. Apes are given puzzles. Elephants push balls, listen to music, and explore the sights and sounds of the Zoo’s woods along their half-mile exercise trek. For others, the enrichment may be more subtle—although

no less important. Even the Zoo’s corals are offered enrichment, says Amazonia keeper Hilary Colton. “They have lighting that is similar to what they would experience in a natural environment. Our lighting systems can even mimic flashes of lightning in a thunderstorm.”

### Planning for Play

The Zoo’s enrichment activities may appear to be pure, spontaneous fun, but a great deal of planning and deliberation goes on behind the scenes before an animal is offered something new. “First, a keeper develops an idea, fills out a form, and then submits it to the area curator for discussion,” explains Steven Sarro, curator of the Zoo’s Small Mammal House and the curatorial advisor for the Enrichment and Training Committee. “If it’s determined to be a good idea, the curator then decides if the enrichment needs to be approved by the medical team or the nutrition team.” Only after the proposed activity is fully reviewed and approved does the keeper begin the process of introducing the activity to the animals.

And the planning does not stop there. Supporting every activity-developing keeper is the Zoo’s Enrichment and



CLOCKWISE FROM ABOVE: Keeper Erin Stromberg works with the orangutans using an app; training a silver arowana; playtime for baby orangutan Redd.

### Help Stock the Zoo’s Toy Box

Balls for the lions and tigers. Toys for the elephants. Treats for the parrots. The list of supplies and goodies used for animal enrichment at the Zoo is long and varied, and keeping everything on hand can get costly. You can help! FONZ members can make an online donation to keep the animals’ toy box full: [fonz.edu/zootoybox](http://fonz.edu/zootoybox). FONZ also maintains a wish list of enrichment items on Amazon, sorted by exhibit. (Hint: Kong toys are a favorite among cheetahs.)





JENNIFER ZOIN/NZP



PAM JENKINS/NZP



SKIP BR. WA



Training Committee. Approximately 60 people participate in the committee, which is chaired by Grubb and vice-chaired by Colton. Collectively, the committee seeks to continually improve animal welfare by supporting keepers, curators, and others active in animal enrichment and training at the Zoo. “We serve as a resource for the animal-care staff,” says Colton. “We facilitate brainstorming sessions. We maintain a database of all the Zoo’s approved enrichment activities. We bring in guest speakers and offer professional development opportunities. We maintain core training supplies so individual keepers don’t have to worry about that.”

In 2017, the Committee added a new item to this list: an excellence-in-training award. “Because we so often use positive reinforcement for our animals, we thought this would be a great way to reinforce the hard work of our keepers as well,” jokes elephant keeper Kayleigh Sullivan, who oversees the Committee’s award program and hopes to make it an annual event. “Hilary Colton received our first excellence-in-training award for training Amazonia’s free-flight birds to voluntarily fly into a catch cage. It can be risky to catch a bird in flight—the bird could get injured, and the stress alone can take a toll on its immune system. For her to train these free-flight birds to fly themselves into a catch cage is incredible.”

Colton and the other Amazonia keepers have training sessions every morning.

They strike a wooden block five times, signaling that breakfast is served. Then the keepers set out high-value rewards like grapes, bananas, meal worms, and wax worms. “We want them to get comfortable entering and exiting the enclosure,” Colton says. The staff tracks which of the 13 free-flight birds are coming in for food. When a bird doesn’t show up, that could be a signal that it’s ill. Or if a pair doesn’t show up, that could mean they’re sitting on eggs.

### Inspiration and Goal

Animal behavior is often at the root of planned enrichment activities. The keepers may want to encourage a behavior that makes animal care easier and safer, for keepers and animals. Or they may use favorite enrichment activities—such as food hidden in containers—to entice the animals to spend more time in the visible parts of their exhibits. Other times, says Colton, keepers may develop an enrichment activity to discourage a behavior. “If we have two animals in an exhibit, and one is eating their



Keepers performing a training demonstration with Asian elephants.

**Save the Date for Enrichment Day** Want see animal enrichment up close? Join the Zoo for a hands-on day of animal enrichment. Visitors can participate in training and enrichment activities, attend demonstrations, and talk with keepers and educators about animal enrichment at the Zoo. August 25, 10 a.m. to 2 p.m.





MEGHAN MURPHY/NZP



CONNOR MALLON/NZP

ABOVE: A Sumatran tiger shows off his ball

PHOTOGRAPHED BY CONNOR MALLON/NZP  
 PHOTOGRAPHED BY CONNOR MALLON/NZP



The real goal is for the animals to be able to act as much like their true wild selves as possible. This is serious fun—fun with a purpose.

food much faster than the other, how can we slow down that one individual so that the other has time to eat too?”

Most often, however, the Zoo’s keepers develop enrichment activities as a way to solicit appropriate species-specific behaviors and support the animals’ welfare. This is why tigers and lions are given items to

wrestle and claw. This is why Colton regularly releases live crickets into Amazonia’s forest: “It kind of ‘wakes up’ all the birds in the room, and gets them actively foraging and exploring different areas than they might otherwise,” says Colton. And this is why Sullivan designed and built a popcorn cannon for the Zoo’s Asian elephants.

“Elephants blow in the wild for numerous reasons,” says Sullivan, explaining the inspiration behind her elephant-powered popcorn cannon. “They blow dust on their backs, blow food out of crevices, blow water into their mouths.” To encourage and better exhibit this natural behavior at the Zoo, Sullivan built a contraption of PVC pipe that allows elephants to blow—but not suck—popcorn and other small food items out into their enclosure. The elephants quickly figured out how to use their trunks to shoot a blast of air through the 10-foot-long device, launching its contents into their enclosure where they can then collect and eat it. “The popcorn shot out further than I expected,” says Sullivan. “I’d say it went about 10 feet and scattered everywhere, which was the goal. They would then spend time foraging the popcorn from the sand.” Sullivan and her peers experimented with other food items as well, and soon discovered that the elephants could launch their leaf-eater biscuits—a favorite treat made of vegetable fiber and tasting of apples—halfway across the Elephant Community Center.



SKIP BROWN/NZP

### Happy Accidents and Unexpected Outcomes

Grubb’s favorite animals to work with are the Zoo’s two two-year-old river otters, which can be found along American Trail. “They interact with almost everything you give them, even if it doesn’t have food in it.” This enthusiasm for play sometimes transforms one enrichment activity into another, says Grubb. “I once gave the river otters some goldfish in a five-gallon water jug. They got the goldfish out, but were still playing with the jug three hours later.”

This is how it goes sometimes. Now and then, enrichment is accidental. “My favorite example involves the red-ruffed lemur exhibit at the Small Mammal House,” says Sarro. “Our team added several large

**Keeper Jackie Conrad**  
training a California sea lion  
on American Trail.




philodendron plants to make the exhibit more attractive, and the six lemurs were very interested. They methodically climbed the rock work above the plants, took aim, and vaulted into the plants one at a time. It was like kids jumping into the deep end of a swimming pool. The plants did not survive, but the lemurs had a great time.”

Just as some things become accidental hits with the animals, other times long-planned enrichment activities turn out to be duds. “The best is when you put a ton of work, thought, and effort into some fabulous new enrichment idea, and the animals give it no response at all,” laughs Grubb, who once constructed a large and elaborate enrichment device for the elephants, none of whom were especially interested. “Just when you think you know what your animals will love, you don’t.”

Or perhaps the animal is intrigued, but its exhibit-mates are even more interested. Colton once needed the help of several other keepers to train some fish in one of Amazonia’s mixed-species exhibits. Her challenge was not with capturing the attention of her trainees. In fact, it was quite the opposite. Her training activities had attracted too much attention within the exhibit, and she needed help keeping the other fishes away so she could focus on training just the one species.

This is one of the great challenges—and joys—of working with living creatures. They each have ideas and behaviors and dispositions of their own, all of which affects their reactions to new enrichment activities. And this is really the point of it all. The grand goal for enrichment is to draw out and inspire appropriate behaviors in the Zoo’s animals, even if those behaviors are sometimes not quite what the keepers expected.

“Enrichment is great fun,” says Grubb. “For most keepers, it’s one of their favorite parts of the job. It lets us be creative while ensuring optimal welfare for our animals, and allows us to educate the public about the care we provide for these amazing animals.” 

—Freelance writer and editor CRISTINA SANTIESTEVEAN is a longtime contributor to the magazine.



Orangutan Lucy with a mirror.

MEGHAN MURPHY/NZP



Throughout FONZ's 60-year history, members have stepped up and raised funds to support Asian elephants, both at the Zoo and for conservation projects in the field. That work is critical in helping save the species, which is endangered in the wild and faces a variety of threats, from poachers to habitat loss. **HERE, A PHOTO PORTFOLIO OF SOME OF FONZ'S BIGGEST ACCOMPLISHMENTS.**



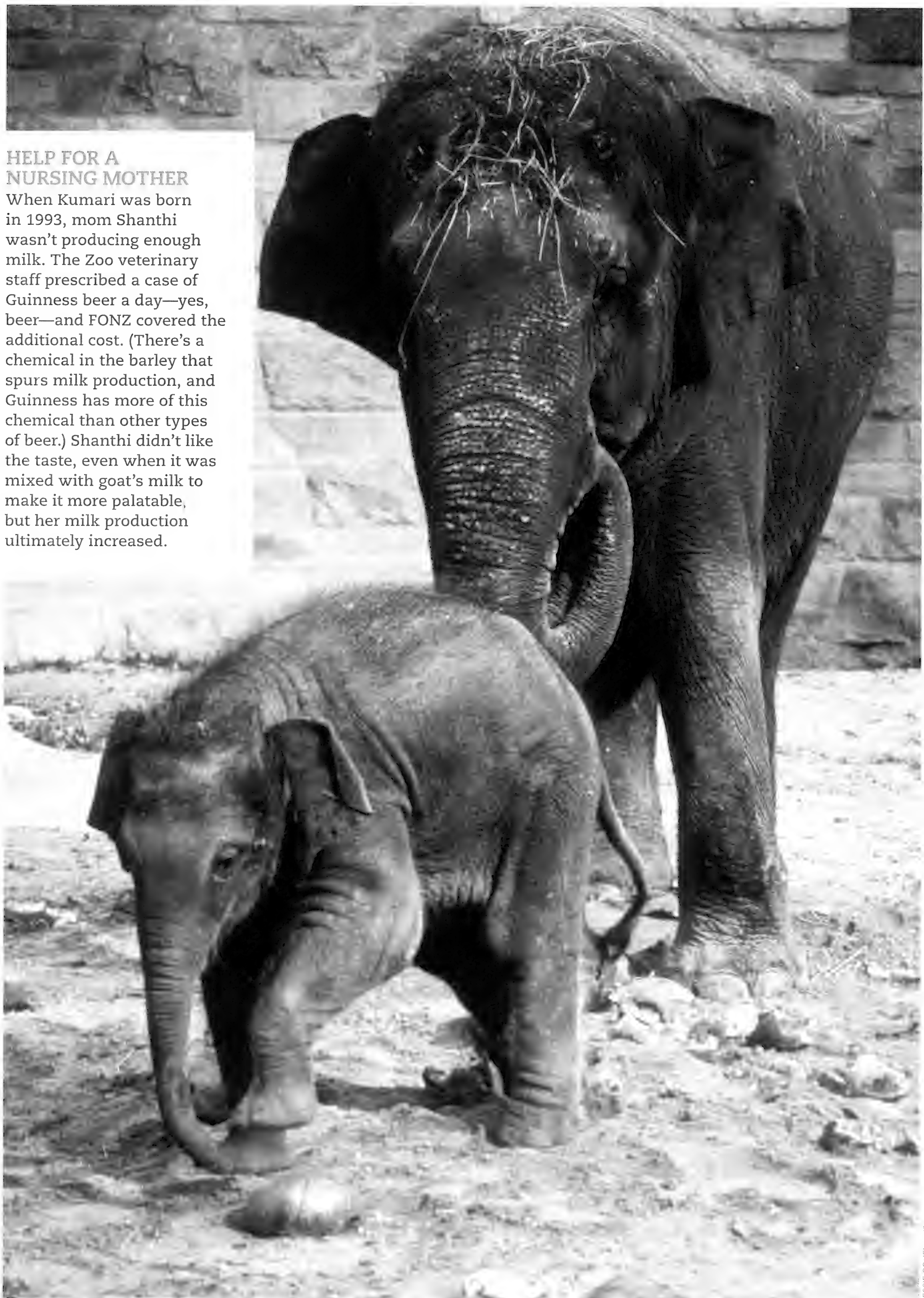
SMITHSONIAN INSTITUTION ARCHIVES

#### CONSERVATION KICKOFF

Not quite a decade after FONZ was founded, the organization made its first conservation grant, \$5,000 to support Asian elephant research in Sri Lanka. That began a long period of collaboration between the Zoo and Sri Lanka, which continues today. In 1976, the Sri Lankan government donated Shanthi, a female elephant then one year old, to the Zoo. Now 43, Shanthi is still at the Zoo and thriving.

Photo by Jeff Gargliano





## HELP FOR A NURSING MOTHER

When Kumari was born in 1993, mom Shanthi wasn't producing enough milk. The Zoo veterinary staff prescribed a case of Guinness beer a day—yes, beer—and FONZ covered the additional cost. (There's a chemical in the barley that spurs milk production, and Guinness has more of this chemical than other types of beer.) Shanthi didn't like the taste, even when it was mixed with goat's milk to make it more palatable, but her milk production ultimately increased.

JESSIE COHEN 1/12



# big love



JESSIE COHEN/NZP

ESSIE COHEN NZP



## ARTIFICIAL INSEMINATION ▶

Over the years, Zoo scientists have refined the processes for artificially inseminating an elephant. When those procedures happen today, FONZ often covers the related travel costs to send researchers to other zoos and facilities—flights, hotels, and other expenses.



MEHGAN MURPHY/NZP



JESSIE COHEN/NZP

## ◀ BABY-PROOFING THE OLD ELEPHANT YARD

When Kandula was born in November 2001, it marked a major milestone: He was only the second Asian elephant born through artificial insemination. After he was born, FONZ set out to raise \$300,000 to make changes to the existing elephant yard to accommodate a young male. Ultimately, the organization raised more than \$600,000.



JESSIE COHEN/NZP

## A NEW HOME ▶

Starting in 2008, FONZ raised funds to help upgrade the old elephant exhibit into a state-of-the-art facility that could house eight to ten adults in a matriarchal pod (similar to the social structures of Asian elephants in the wild), along with bathing pools, play areas, and a quarter-mile exercise trek. Of the \$55 million total cost, approximately half came from nongovernment sources, including contributions from FONZ members.



# big love



## PLAY TIME

In 2011 and 2012, FONZ volunteers who served as interpreters at the Zoo raised more than \$40,000 as part of the Ambassador program to buy several enrichment structures for the new Elephant Trails exhibit, including a scratching post and other jumbo toys.





### BOZIE'S ROAD TRIP

In 2013, Bozie traveled from the Baton Rouge Zoo to the Smithsonian's National Zoo.

She made the 1,100-mile trip to Washington, D.C., in about 28 hours, much of it with her trunk out the window. Bozie had special treats (marshmallow Peeps) to keep her calm on the road trip, and a police escort when she got close to the Zoo. FONZ donations covered the entire cost of the trip, including her care during the transition.

NANCY BOEDEKER/NZP



# big love



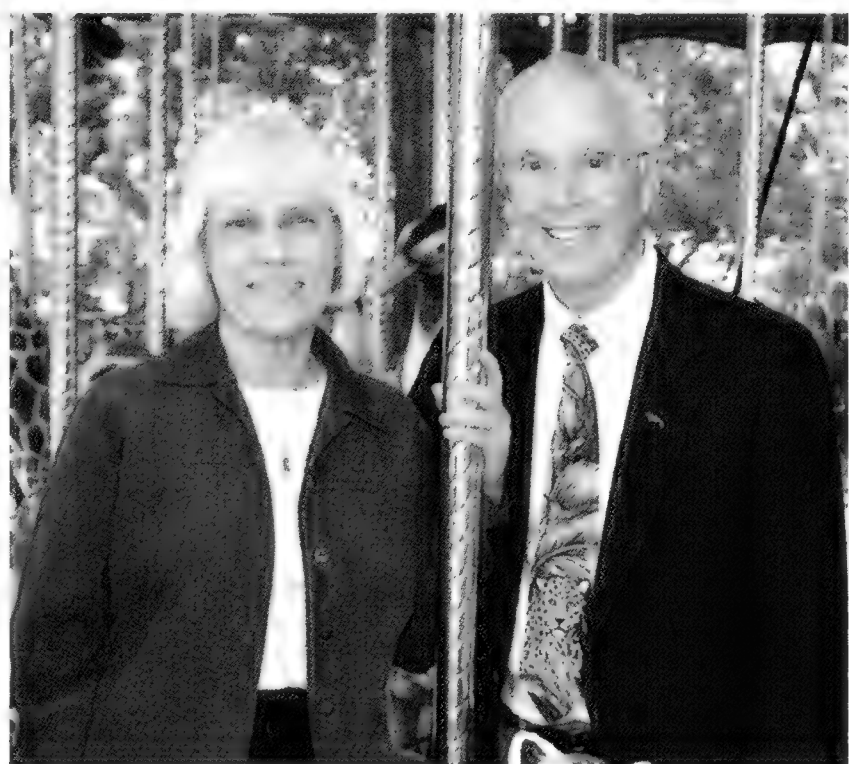
## CONSERVATION NATION

FONZ members contributed funds to purchase tracking collars used to study Asian elephants in Myanmar, where fewer than 2,000 remain. The massive collars weigh about 30 pounds. Through this research, Zoo and SCBI scientists are learning about the threats these animals face, so they can save the species. Asian elephants are a priority for Conservation Nation this year. Learn more—and give—at [conservationnation.org](http://conservationnation.org).





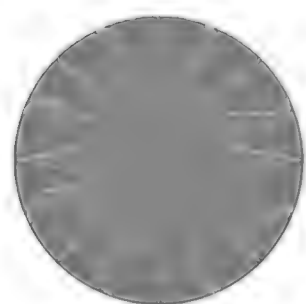
# Protecting Them in the Future Costs You Nothing Today



The Smithsonian's National Zoo is a special place for life-long animal lovers Paul and Becky Dhyse. They are glad to know that the Zoo's research and conservation efforts will help big cats thrive in the wild for generations to come.

Paul and Becky are putting their passion into action by leaving a gift to the Smithsonian in their will. You can join them and make *your* mark on the world with a gift to the Smithsonian's National Zoo in your will or trust, or by designating it as a beneficiary. **And, it costs you nothing now.**

For information on planned giving, please contact Drew Portocarrero, Office of Advancement, Smithsonian's National Zoo & Conservation Biology Institute. 202-505-0681, [PortocarreroA@si.edu](mailto:PortocarreroA@si.edu).



Smithsonian  
*National Zoological Park*  
*Conservation Biology Institute*



# Fighting for Frogs

BY VALERIE MAY AND  
GEORGE STUTEVILLE

A skin fungus continues to threaten amphibian populations, and hundreds of species are at risk of going extinct. But Zoo and SCBI researchers have stepped in to save some species in human care, and there are early signs of a recovery in the wild as well.







In January, researchers released 500 variable harlequin frogs along the muddy bank of a stream in Panama. The frogs—bright orange and each about the size of a half-dollar—had been bred and raised under human care as part of a decades-long effort to save amphibians threatened by a deadly fungal skin disease. Among the frogs, 30 had been fitted with tiny radio transmitters. Researchers had given others markings that could be seen under ultraviolet light. The project was priority for Conservation Nation last year and funded in part through FONZ donations. The goal was to see if these frogs could survive in the wild. The steady rain that day made it tough on the researchers, but the wet conditions were ideal for frogs, which quickly disappeared into the jungle.

Since 1980, a disease known as chytridiomycosis, or chytrid for short (pronounced “KIH-trid”), has been wiping out populations of frogs and other amphibians at

BRIAN GRATWICKE/NZP

Researchers have preserved a sustainable population of variable harlequin frogs



# Fighting for Frogs

**ABOVE:** Researchers used a radio tracker to find *Limosa harlequin* frogs after their release.

**BELOW LEFT:** Some frogs were fitted with a transmitter weighing just 0.3 grams, or slightly more than a drop of rain.

**BELOW RIGHT:** Researchers also marked some frogs so that they would show up under ultraviolet light.



ROSHAN PATEL/NZP



BRIAN GRATWICKE/NZP



ROSHAN PATEL/NZP



apocalyptic rates. Combined with other threats such as pollution, climate change, and loss of habitat, chytrid threatens nearly a third of all amphibians. More than 120 species have gone extinct since 1980. (The variable harlequin frogs that Zoo researchers released are critically endangered.) Now, with the breeding program and other advances through Zoo and SCBI scientists, there is cautious hope that the amphibians of Central America and the entire world have a chance.

### Early Warning Signs

Zoo and SCBI researchers have been fighting chytrid for more than two decades. Initially, chytrid was a scientific mystery; no one could figure out why frogs, toads, salamanders, and newts were dying off at such tremendous rates, or how the disease was moving so quickly from country to country. In 1996, the plague descended on a colony of blue poison dart frogs at the Reptile Discovery Center, killing them all. When Zoo pathologists conducted necropsies of those frogs, they thought the skin looked as if it had been affected by an obscure little-studied fungus called chytrid. They reached out to an expert at the University of Maine who was able to extract the genetic material of the fungus. Her discovery: the virulent form of the disease was not just of a new type of chytrid but an entirely new genus—the first such fungus to affect vertebrates.

The cultures made from the isolated fungus helped scientists learn the pathways of infection and—critically—develop protocols for treating the disease. Today, most frogs, toads, salamanders, and newts in human care are safe from chytrid. However, species in the wild were dying at such high rates that researchers concentrated on rescuing the most-threatened populations. The disease had spread around the planet, including Australia, Africa, and North America, but it was acute in Central America. That's where SCBI scientists joined an initiative called the Panama Amphibian Rescue and Conservation Project (PARC). Members also came from the Smithsonian Tropical Research Institute

(STRI), Cheyenne Mountain Zoo, the Houston Zoo, Defenders of Wildlife, and Zoo New England.

### A Rescue Mission in Panama

"In 2008, when I was hired to lead the program here at SCBI, the chytrid fungus was sweeping through Panama," says Brian Gratwicke, the lead scientist and international coordinator for PARC. At that point, the Smithsonian already had significant infrastructure in Panama

through the STRI, which has been operating in the country since 1910. "This was the way we could leverage existing Smithsonian infrastructure to help tackle the global amphibian crisis," Gratwicke explains.

PARC's first objective was a Noah's Ark-type rescue mission in which scientists would capture enough frogs and toads of threatened species to ensure that they could preserve a sustainable captive population. Racing against time, research-

## What is Chytrid?

A chytrid is a type of fungus. There are more than 1,000 different types, all of which typically live in water or wet environments. In 1999, Zoo scientists collaborated with a researcher from the University of Maine to identify a new fungus that affected the skin of amphibians; it is the only chytrid that affects vertebrates, through a disease called chytridiomycosis. That discovery was a scientific milestone, but it hasn't slowed the ravages of the disease among wild amphibian populations.

Chytrid kills by infecting skin cells of amphibians and thickening the skin. That prevents amphibians from absorbing moisture and certain salts through their skin. (Amphibians don't drink through their mouths.) The disease is dangerous because it leads to rapid population declines, particularly among species that are rare, specialized, and unique to a specific area. Since 1980, 122 amphibian species have gone extinct from the disease and other threats, and 42 percent of the 7,500 species on the planet are at risk of going extinct in our lifetime.



BRIAN GRATWICKE/NZP



# Fighting for Frogs



BRIAN GRATWICKE/NZP

ers plunged into Panama's cloud forests and captured enough frogs and toads to ensure genetically viable captive populations of a dozen species. In husbandry terms, that means at least 20 unrelated pairs to have a viable founding population.

One such species was the Panamanian golden frog. That neon-colored frog is an icon in Panama and a national symbol of good luck. Its picture is found on t-shirts, local crafts, and even lottery tickets. Currently, the Association of Zoos and Aquariums has a Species Survival Plan (SSP) in place for the Panamanian golden frog. The SSP oversees the breeding of these tiny beacons of hope in zoos and aquaria across the U.S. and Panama, and it ensures that this species will survive in human care, with a long-term goal of returning them to the wild.

**LEFT:** Lead scientist Brian Gratwicke preparing variable harlequin frogs for the release trial.

**BELOW LEFT:** Heidi Ross and Jorge Guerrel conducting a survey to estimate the population of released frogs.

**BELOW RIGHT:** Roberto Ibanez, director of the Panama Amphibian Rescue and Conservation Project.



BRIAN GRATWICKE/NZP



BRIAN GRATWICKE/NZP



## Halting Progress

Some species have thrived in the captive-breeding program, with populations large enough to allow researchers to introduce some of them back into the wild. The first release took place in June 2017, when PARC scientists set 90 *Limosa* harlequin frogs free in the wild, tagging some with tiny radio transmitters. That was followed by a second, much-larger release of 500 variable harlequin frogs (a close cousin to the Panamanian golden frog) this past January. The goal was to determine whether the frogs could adapt to living in the wild and find their own food. Scientists also weren't sure whether the frogs—which were protected from chytrid while in human care—would succumb to the disease in the wild.

Of the 90 frogs in the first release, many did die of chytrid. Scientists also ran into technical issues with the tiny transmitters, which had batteries that only lasted 45 days. The second release is an ongoing project, but the frogs are proving harder to find than the team initially anticipated. Gratwicke acknowledges the difficulty of tracking these tiny animals in a tropical forest. “Part of the learning curve is simply getting better at locating the frogs,” he says. “We need to get to the place where we can do successful reintroductions. The early releases are the way we learn how to do that.”

Meanwhile, research continues on how to mitigate the disease, including work being done at the Zoo's Reptile Discovery Center (RDC). For example, a team of researchers and RDC staff looked at modifying the microbes on frog and toad skin to make it more resistant to chytrid. That approach makes intuitive sense, but ultimately it didn't work. In a series of experiments, the team tried to augment the skin bacteria of golden frogs with bacteria that produced antifungal chemicals. “The bacteria inhibited the chytrid fungus in a test tube, but we had trouble successfully manipulating the microbiome of the frog,” says Gratwicke. More research is needed to understand if this might be possible.

## Promising Signs

Yet there are other glimmers of good news. In the past several years, species thought to be extinct have been spotted in the wild.

While hiking through the forests of Panama in 2013, two biologists—Drs. Jamie Voyles, with the Smithsonian Tropical Research Institute, and Corinne L. Richards-Zawacki—noticed a tiny black-and-gold frog sitting on a rock. It was a variable harlequin frog, a species thought to have been nearly wiped out in the wild by chytrid.

On return visits, the two have found several other species thought to have disappeared. Some, in fact, seem to be rebounding in areas where other frogs are dying. Why? Voyles, an assistant professor at the University of Nevada, Reno, and Richards-Zawacki, associate professor at the University of Pittsburgh, are working to learn what makes some species able to

fight off the disease. One possibility is that the rebounding populations appear to have developed a skin mucus that makes them chytrid-resistant, at least to the point that they can survive.

Among the multiple organizations working this issue, researchers still have far more questions than answers. But the science is ongoing, and the fight to save frogs, toads, and other amphibians continues. In the meantime, each frog spotted in the forests of Panama feels like a victory. **SZ**

—Freelance writer and editor VALERIE MAY is a longtime contributor to *Zoogoer*. GEORGE STUTEVILLE is a journalist who specializes in science and technology.

## Get Involved

Want to directly help these scientists and endangered frogs? You can give to Conservation Nation, where donations go directly to support Zoo and SCBI researchers. Restoring the Central American frog population has been one of the initiative's central priorities, and the work was partly funded by donations from FONZ members. Learn more at [conservationnation.org](http://conservationnation.org).

Amazonia and Reptile Discovery Center have large collections of amazing frogs, toads, and salamanders, including the Panamanian golden frog. (Both exhibits hold daily keeper talks for visitors at 11 a.m.)

You can also follow the Panama Amphibian Rescue and Conservation Project—including updates on the release of frogs into the wild and other major milestones—at PARC's website, [amphibianrescue.org](http://amphibianrescue.org).



BRIAN GRATWICKE/NZP



## Hot Summer. Cool Zoo.

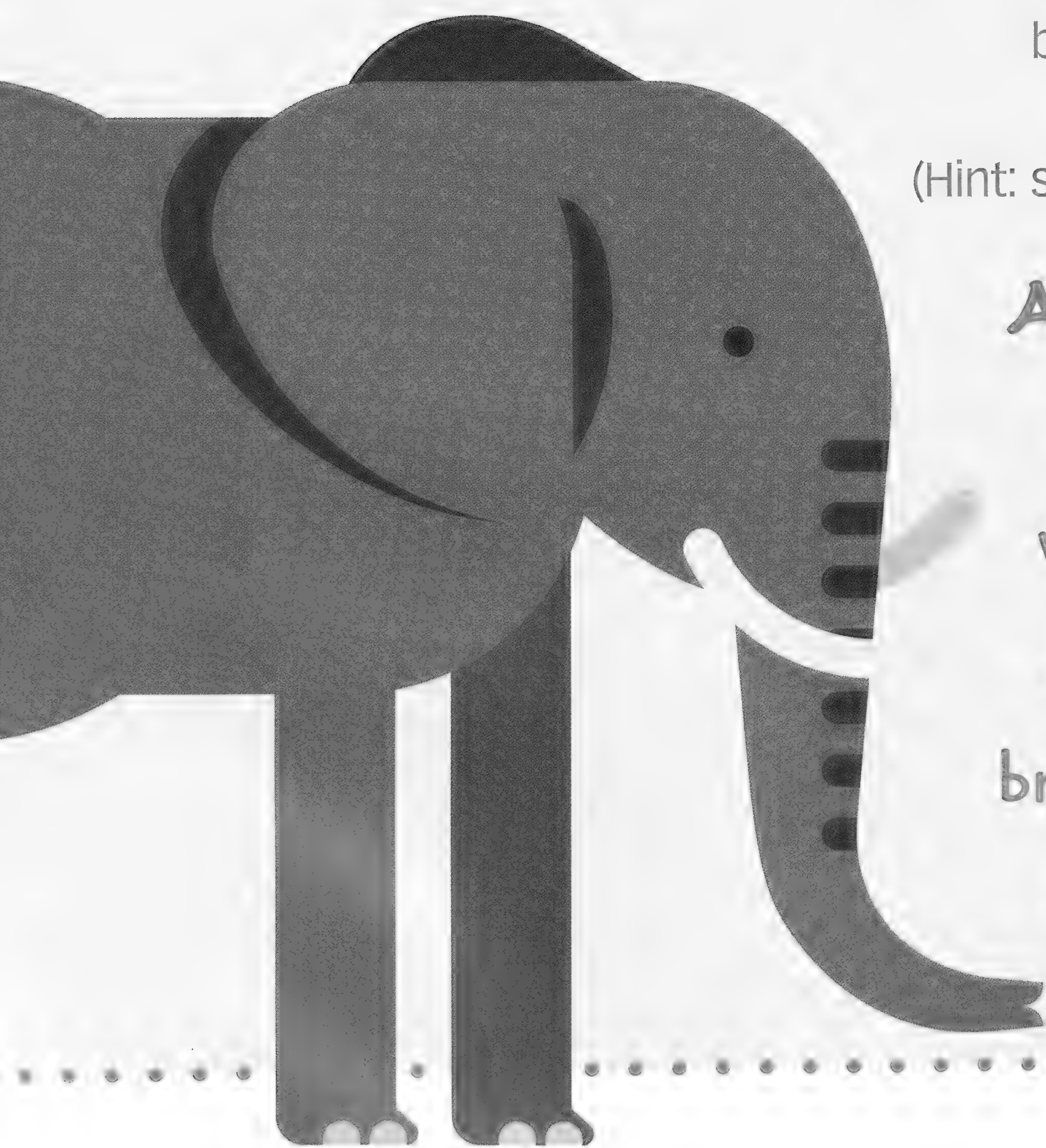
Summertime can get sizzling hot at the Zoo—and all around the world where animals live in the wild. Discover some of the amazing and surprising ways animals stay cool, and then try some of them out for yourself!

### Too Hot? There's a Body Part for That.

Can you match the animal with the body part it uses to keep itself cool?

*Find answers on page 39!*

(Hint: some animals might have more than one.)



#### ANIMALS

elephant  
wood stork  
fennec fox  
brown pelican  
gray wolf

#### BODY PARTS

ears  
throat  
trunk  
tongue  
legs





# Go Wild to Get Cool —

Try these animal-approved strategies for cooling off the next time you feel too hot.

## Seek some shade

Reptiles and amphibians rely on the sun's warmth to heat their bodies, but too much heat can harm them. So when things get too toasty, Gila monsters and many other reptiles and amphibians seek out a shady spot or burrow where they can cool off away from the sun's rays.

## Roll in the mud

You may want to check with an adult before trying this one, but rolling in the mud and dirt is a common way for many animals to keep cool. This behavior is called wallowing, and the Zoo's American bison, Asian elephants, and red river hogs all do it to help cool themselves off on hot summer days.

## Eat a frozen treat

Wild animals don't have this option, but many of the Zoo's animals enjoy frozen pops made of fruit, meat, and other favorite treats. (Tigers even get frozen blocks of blood!) These treats help Zoo animals cool off and also give them something fun to play with.

## Take a nap

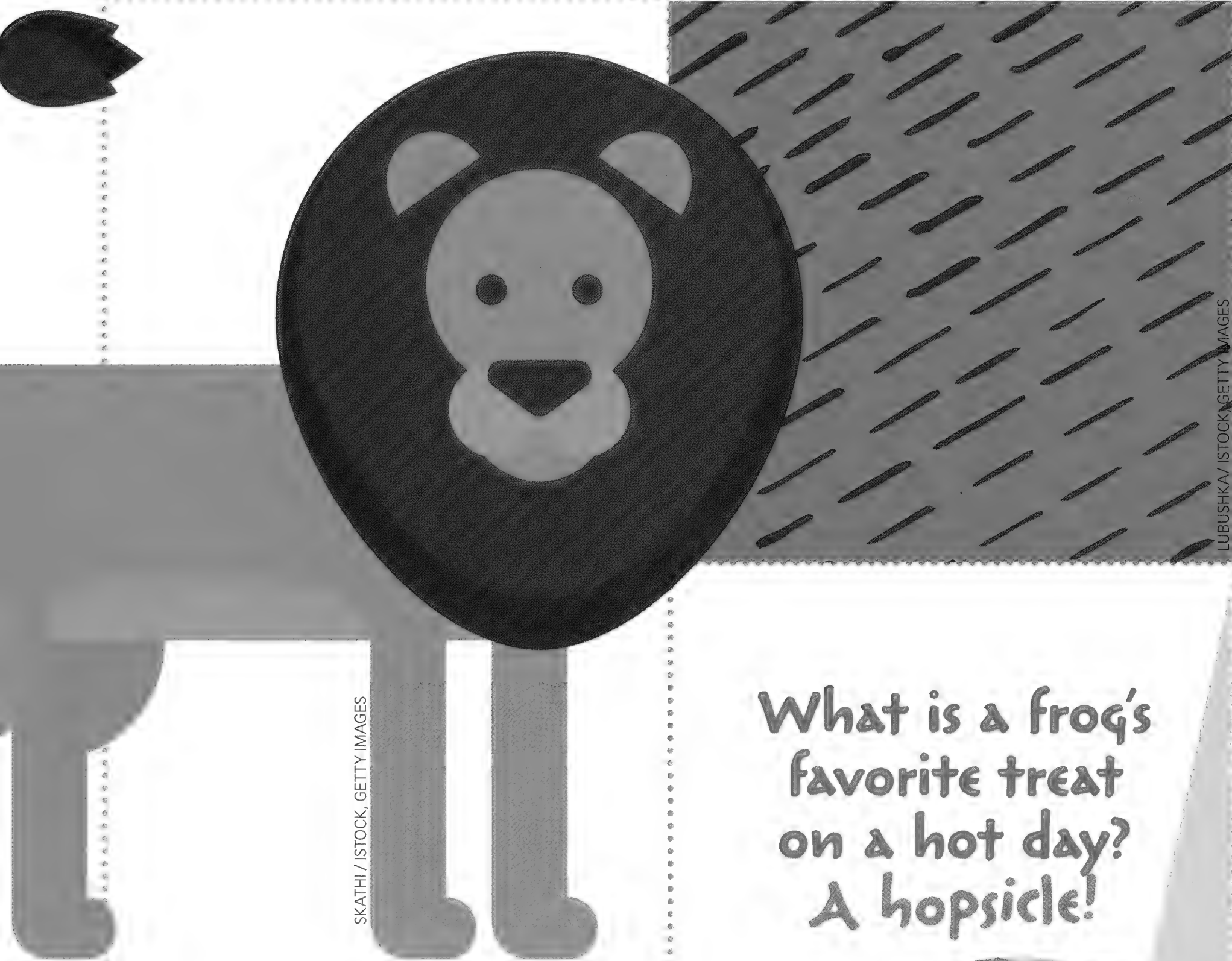
Too hot to handle? Sleep through it, just like a lion or tiger! Taking a nap helps your body conserve energy and keep cool.





## Snickering Summertime —

Laugh off the heat with these silly gigglers.



SKATHI / ISTOCK, GETTY IMAGES

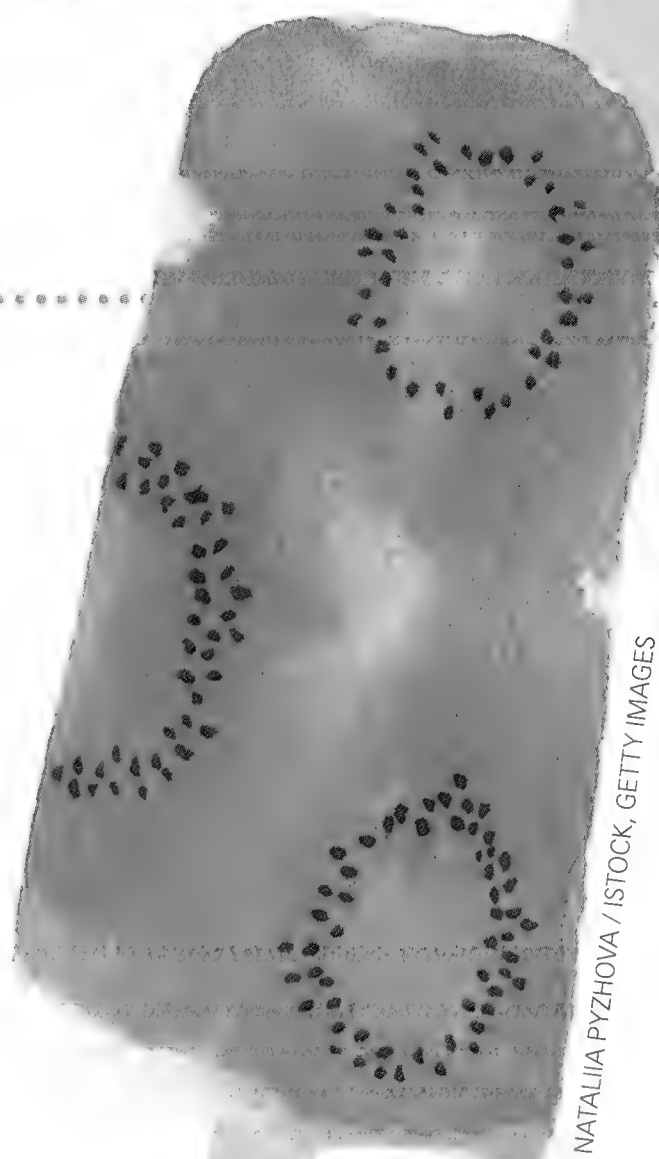
LUBUSHKA / ISTOCK, GETTY IMAGES

How do pandas  
keep cool in the  
summertime?  
They use  
bear-conditioning!

What is a frog's  
favorite treat  
on a hot day?  
A hopsicle!

Knock knock.  
Who's there?  
Iguana.  
Iguana who?  
Iguana go to  
the beach!

What do you get  
when you  
cross an elephant  
with a fish?  
Swimming trunks!



NATALIA PYZHOVA / ISTOCK, GETTY IMAGES

What's black and  
white and red  
all over?  
A zebra with  
a sunburn!



# No Water, No Problem!

People need to drink water every day—especially when it’s hot out—but one animal can go its entire life without drinking! Check out the amazing features of the kangaroo rat.

## H2-0H WOW!

The all-time champs in water conservation are **KANGAROO RATS**. These animals, which live in the southeastern U.S., can go their *entire lives* (three to five years) without ever taking a drink. Here are their super-saver features that allow them to get by in extreme conditions:

- They sleep during the day, when it’s hot out, venturing out only at night.
- They live on seeds and beans, which have built-in moisture.
- They have no salivary glands and no sweat glands, so they don’t lose as much body moisture.
- They have external, fur-lined pouches to carry seeds. That way, if they find some extra food, they can transport it back to the nest without opening their mouths in the hot air.
- They have very long air passages, so that any moisture in the air they exhale can get reabsorbed into the body before it escapes.



IPGGUTENBERGUKLTD/ISTOCK, GETTY IMAGES

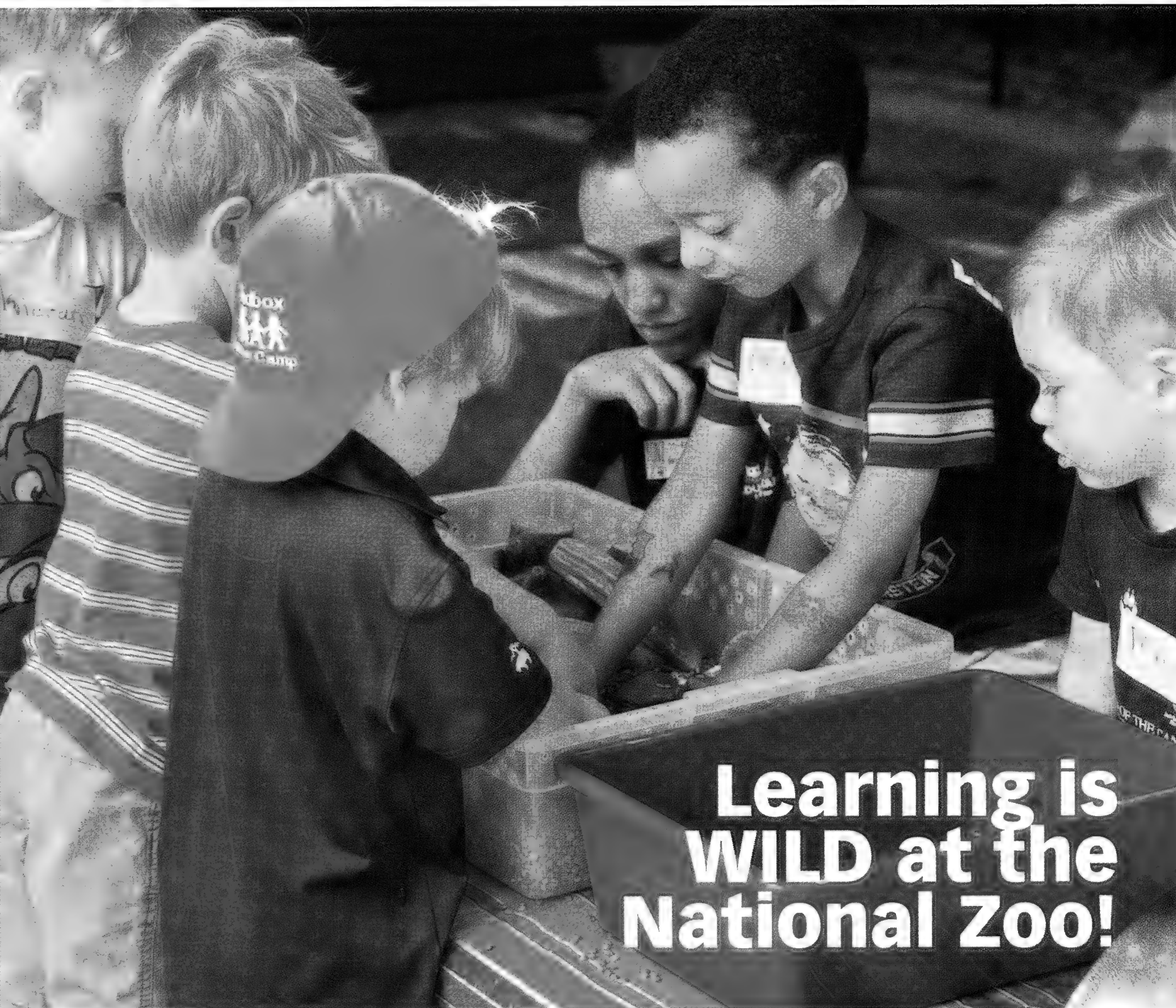
# Too Hot? There’s a Body Part for That. Answers from page 36

- **Brown pelican <-> throat**  
When some birds like brown pelicans get too hot, they vibrate their throat muscles to help reduce their body temperature. This is called “gular fluttering,” and it works by increasing the flow of air through their throat.
- **Elephant <-> trunk and ears**  
The Zoo’s biggest animals use their long trunks to suck up water for do-it-yourself showers. They also cool off through their ears, which circulate blood close to the skin.
- **Fennec fox <-> ears**  
Those big ears aren’t just for listening. Fennec foxes use their ears like radiators, releasing body heat into the air when they get too hot for comfort.
- **Gray wolf <-> tongue**  
Dogs pant—and so do their wild cousins. Wolves’ droopy, dripping tongues help reduce their temperature by dumping excess body heat. Breathing fast also helps reduce body temperature by expelling hot breath into the air.
- **Wood stork <-> legs**  
Birds don’t sweat. To keep cool, wood storks and some other birds will poop on their legs. As their watery poop evaporates, it helps lower their body temperature. This may sound icky, but it works for storks and some other birds. Just don’t try it at home!



# FONZ

## CHILDREN'S CLASSES & CAMPS



Learning is  
**WILD** at the  
National Zoo!

ERIN SCOTT/FONZ

**FONZ classes use hands-on activities, nature-based play, and the Zoo's animal collection to help your child learn about science and environmental conservation. Whether you prefer a regular, weekly experience with your child or a one-time program about her favorite Zoo animal, you're sure to find a class to suit the needs of your young animal lover. Classes for ages 0-14 are now available.**

Classes do not include behind-the-scenes visits or direct contact with the animals, but they do use pelts, bones, feathers, and other touchable artifacts. For everyone's safety, unregistered children may not attend.

See detailed descriptions and register at [fonz.org/classes](http://fonz.org/classes).

### WEEKEND AND SINGLE-SESSION CHILDREN'S CLASSES

Single-session classes for children and adults to enjoy together! Interactive stations and a hands-on discussion get you ready to visit the animal of the day!

**See [fonz.org/classes](http://fonz.org/classes) for specific information about ages and dates.**

**New for 2018! Bye-bye promo codes, hello new registration system! To receive your member discount, simply create a new account and log in using your member account information. Member discounts will be applied automatically during registration.**

You will need your FONZ member ID number to log in and receive the member rate. This system enables you to register multiple children at once, view your account online, and make payments.

### NATURE CUBS SUMMER SERIES

Nature Cubs summer classes meet once a week for three or four weeks and invite children to build their knowledge of animals and the natural world while strengthening important academic, developmental, and social skills.

#### Shapes with the Apes

Join us on a shape safari at the National Zoo! A different animal each week will help us practice shape recognition and categorization! June 5-28; 9-10:30 a.m.

Ages 2-3 meet Wednesdays or Thursdays  
Ages 3-5 meet Tuesdays

#### Beach Buddies

Cool down with some of the Zoo's favorite watery wonders! Dive in as we learn about seals, pelicans, and more!

July 10-26; 9-10:30 a.m.  
Ages 2-3 meet Wednesdays or Thursdays  
Ages 3-5 meet Tuesdays

#### NEW: ZooTunes for Tots!

Wiggle, giggle, move, and groove! It's a brand new music and movement program for our littlest Zoogoers and their caregivers! Specially designed for tots under 2, ZooTunes will have you tapping your toes, twitching your tail, and roaring with the animals! May 31, June 1, 7, 8, 14, 15 9-9:45 a.m. or 10-10:45 a.m.

#### Snacks with the Sea Lions

Learn about the favorite foods of the Zoo's playful pinnipeds and then spend snacktime with them in the Sea Lion grotto! June 9, 10; August 4, 5  
Ages 2-3 and 3-5

#### Lion Lessons

Do you have what it takes to be part of the pride? Learn what it's like to be a lion! June 16, 17  
Ages 2-3

#### Who's New at the Zoo?

Get to know the new faces, flippers, paws, and claws at the Zoo! June 23, 24; July 28, 29  
Ages 2-3 and 3-5

#### Breakfast with the Bears

Learn about the favorite foods of the National Zoo's bears and then enjoy a real teddy bear picnic for snacktime! June 30, July 1  
Ages 2-3 and 3-5

#### Ele-Fun

The Zoo's gentle giants want you to join the herd! Try out your own trunk as we learn about elephants! July 7, 8; August 7, 8, 9, 11, and 12  
Ages 2-3 and 3-5

#### Curious George Goes to the Zoo

Put on your yellow hat! We're learning about some of our favorite curious little monkeys at the Zoo! July 14 and 15  
Ages 2-3

#### Calling All Cats

The National Zoo is full of cool kitties and furry felines. Discover what makes these cats so purr-fect. July 21, 22  
Ages 2-3 and 3-5

#### Panda Party

Explore the hidden world of these beautiful bears and then visit the Zoo's most famous family! August 14, 15, 16, 18, 19, 25, and 26  
Ages 2-3 and 3-5



**This is no  
ordinary  
camping trip!**



**SNORE & ROARS ARE NOT JUST FOR KIDS!** Adult-only programs include a keeper-led tour of an exhibit area, wine and cheese, activities, a guided tour of the Zoo, and a breakfast snack. Find a schedule and register for an adult-only Snore & Roar online: [fonz.org/SnoreandRoarAdults](http://fonz.org/SnoreandRoarAdults)

## Snore & Roar Overnights

**REGISTRATION** Registration is now open. Snore & Roars are rain-or-shine events.

**FAMILIES:**

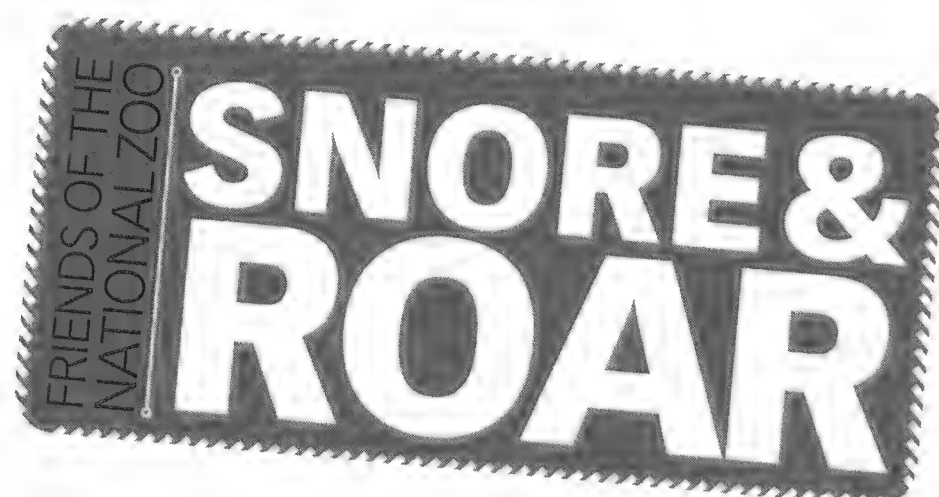
\$100-\$140 per person for FONZ members  
\$120-\$168 per person for non-members

**ADULTS:**

\$150/person for FONZ members  
\$180/person for non-members

**AGES** All children must be at least 6 years old by the date of the program. No refunds will be granted for registrations involving children under 6 years of age.

**Tour Choices** Enjoy an exclusive keeper-led tour of Zoo exhibits, including American Trail, Asia Trail, Elephant Community Center, Great Cats, Reptile Discovery Center, or the Small Mammal House. Find a full list and register online at [fonz.org/snoreandroar](http://fonz.org/snoreandroar).



## Scout Snooze Overnights

**Bring your troop for a wild night they won't soon forget!** Your Scout Snooze will include all components of a Snore & Roar, with crafts and

activities geared specifically toward scouts. Your group will sleep in four- or six-person tents. Scout leaders are responsible for tent assignments.

**Scout Snooze sleepovers are available to FONZ members only!**

To register, at least one adult per scout group must have a FONZ membership. Find a schedule and register online:

[fonz.org/scoutsnooze](http://fonz.org/scoutsnooze)

**REGISTRATION**

Registration is now open. Scout Snooze is a rain-or-shine event.

**FEES** \$900 for up to 10 people. \$90 for each individual beyond that. Maximum of 20 participants total (adults included).

**AGES** All children must be at least 6 years old by the date of the program. No refunds will be granted for registrations involving children under 6 years of age.

A paying adult must accompany all participants under 18, and one adult chaperone is required for every three children.

**Tour Choices** Enjoy an exclusive keeper-led tour of Zoo exhibits, including Amazonia, the Reptile Discovery Center, or the Small Mammal House. Find a full list and register online at [fonz.org/scoutsnooze](http://fonz.org/scoutsnooze).



**Falling asleep as wolves howl, waking up to the roar of lions—it sounds like fantasy but it's reality for Snore & Roar campers at the Zoo!** Your overnight adventure includes a keeper-led tour of an exhibit, activities and games, a tent on Lion/Tiger Hill, and a breakfast snack. It's a wild, wonderful opportunity to have the Zoo to yourself after hours. Find a schedule and register at [fonz.org/snoreandroar](http://fonz.org/snoreandroar) or [fonz.org/scoutsnooze](http://fonz.org/scoutsnooze).



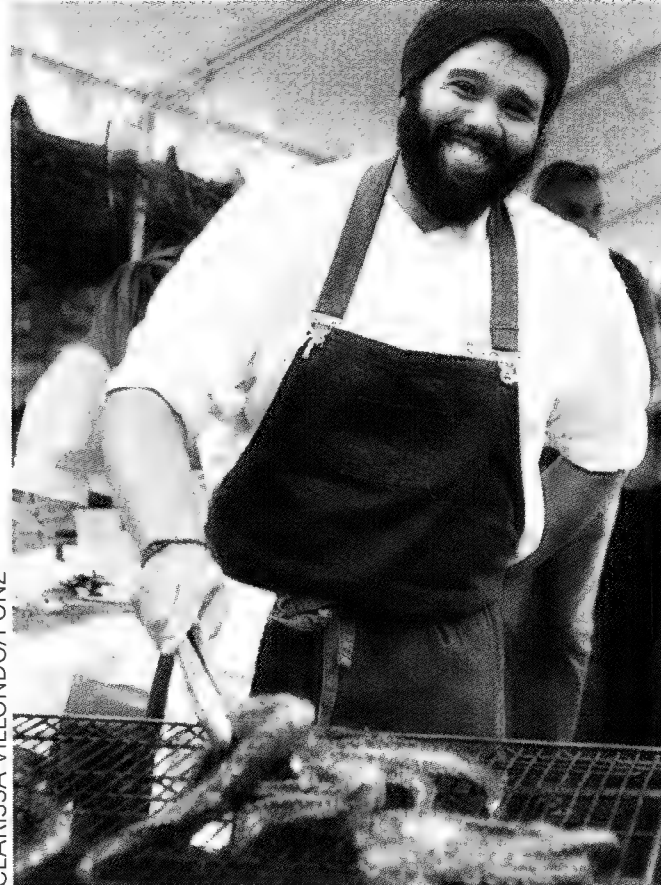
# FONZ ZOOFARI



JOHN THOMAS CONSOLI/FONZ



JOHN THOMAS CONSOLI/FONZ



CLARISSA VILLONDO/FONZ

## RESTAURANTS

Agora Restaurant  
Ana at District Winery  
Asia Nine Bar & Lounge  
Baked by Yael  
Baker's Crust Artisan Kitchen  
Baklava Couture  
Barcelona Wine Bar  
Barley Mac  
Barrel  
Bastille Brasserie and Bar  
Blackfinn Ameripub  
BRABO Tasting Room  
Busboys and Poets  
Calvert Woodley Fine Wines & Spirits  
Casolare Ristorante + Bar  
Cava Mezze  
Charlie Palmer Steak  
Chef Geoff's / Cafe Deluxe  
Chef Huda  
Chesapeake Bay Roasting Company  
Chicken + Whiskey  
CIRCA at Chinatown  
Congressional Country Club  
Congressional Seafood Co.  
Cooper's Hawk Winery & Restaurants  
The Daily Dish  
DC Sweet Potato Cake  
Delia's  
Dirty Habit  
DNV Rooftop  
Duke's Counter  
El Centro D.F.  
Entyse Wine Bar & Lounge  
Equinox Restaurant  
Estadio  
Farmers & Distillers

Federal City Bar at The Washington Court Hotel  
Firefly  
Fourth Estate at the National Press Club  
Georgetown Cupcake  
The Grilled Oyster Company  
Hank's Oyster Bar  
Hank's Pasta Bar  
Hard Times Cafe  
Hill Country Barbecue Market  
Ice Cream Jubilee  
Indique  
Iron Gate  
Joe's Seafood, Prime Steak & Stone Crab  
Kora Lee's Gourmet Dessert Cafe  
Lebanese Taverna  
Lost Society  
Manna Restaurant  
Masa 14  
Mastro's Steakhouse  
matchbox vintage pizza bistro  
Mayahuel Cocina Mexicana  
Mintwood Place  
Mon Ami Gabi  
Morrison-Clark Historic Inn & Restaurant  
Muze  
NazcaMochica  
New Heights Restaurant  
Nicecream  
Number 1 Sons  
Occasions Caterers  
Ocean Prime  
Oceanaire Seafood Room  
Peregrine Espresso  
Pinstripes  
Pizzeria Vetri  
Proof  
The Pub & The People

Purple Patch Restaurant  
Radiator  
Rocklands Barbeque and Grilling Company  
Royal  
RPM Italian  
Santa Lucia Estate Coffee  
Sonoma Restaurant & Wine Bar  
Spun Cotton Candy Art  
Sugar & Ice—and everything nice  
Summer House Santa Monica / Stella Barra Pizzeria  
Supra  
Sweet Home Cafe  
Ten Penh  
Tonic Restaurant  
Toro Toro  
Uptown Bakers  
Urbana Dining & Drinks  
Well Dunn Catering  
The Wine Kitchen  
Leesburg

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Redemption Pre-Prohibition Style Whiskey  
Virginia Distillery Co.

A tremendous **THANK YOU** to the sponsors, restaurants, vintners, and distillers that supported ZooFari: Dine for Wildlife, sponsored by GEICO. The event was a tremendous success, with food, fun, and entertainment, and it would not have been possible without their contributions. Most important, the night raised funds to help the Zoo's mission to save species.

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CELEBRATE FRIENDS  
OF THE NATIONAL ZOO'S  
60TH ANNIVERSARY  
DURING THE MEMBER  
CELEBRATION ON  
**JUNE 30.**

Members and their families get special treatment, including access to exclusive animal demonstrations and a peek behind the curtain at the Zoo's conservation work!



Members of all ages are invited to enjoy animal enrichment and keeper chats along American Trail or hop aboard a shuttle ride to explore Research Hill, part of the Zoo rarely open to the public.

This member-only event is free to attend, but you will need to RSVP in advance.

RSVP at [fonz.org/june-member-celebration](http://fonz.org/june-member-celebration).

Not a FONZ member? Join today, and you can attend the Member Celebration on June 30. Following the event, the general public is invited to join the celebration of FONZ's 60th anniversary.

**American Trail will be open for FONZ members only from 8 a.m. to 10 a.m.**

*(American Trail opens to the public at 10 a.m.)*

**8 a.m.**—Gray wolf enrichment

**8 a.m. to 9 a.m.**— Behind-the-scenes look at the seal and sea lion kitchen

**8:30 a.m.**—Raven feeding

**9 a.m.**—Narrated seal training demo

**9:30 a.m.**—FONZ update with Executive Director Lynn Mento

**10 a.m.**—River otter feeding

**Research Hill** *(accessible only by shuttle)*

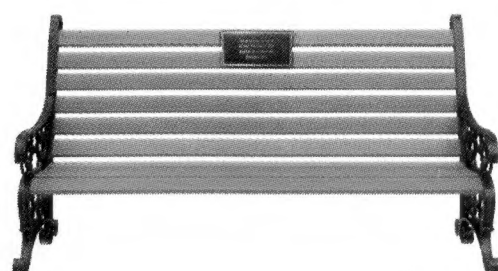
From 8 a.m. to 11 a.m., Research Hill will open exclusively to members via a shuttle from American Trail. For more information, check [fonz.org/june-member-celebration](http://fonz.org/june-member-celebration).

### Call for FONZ Board Nominations

Help chart the future of FONZ by nominating yourself or another current member for our Board of Directors. The volunteer Board works closely with FONZ leadership to guide our efforts and shape our success. Each year our priorities for Board recruitment change based on our Board makeup and organizational goals. For 2019, we are looking for individuals with experience in the local business community to advise on business-to-business engagement strategies and enhance our corporate fundraising capabilities.

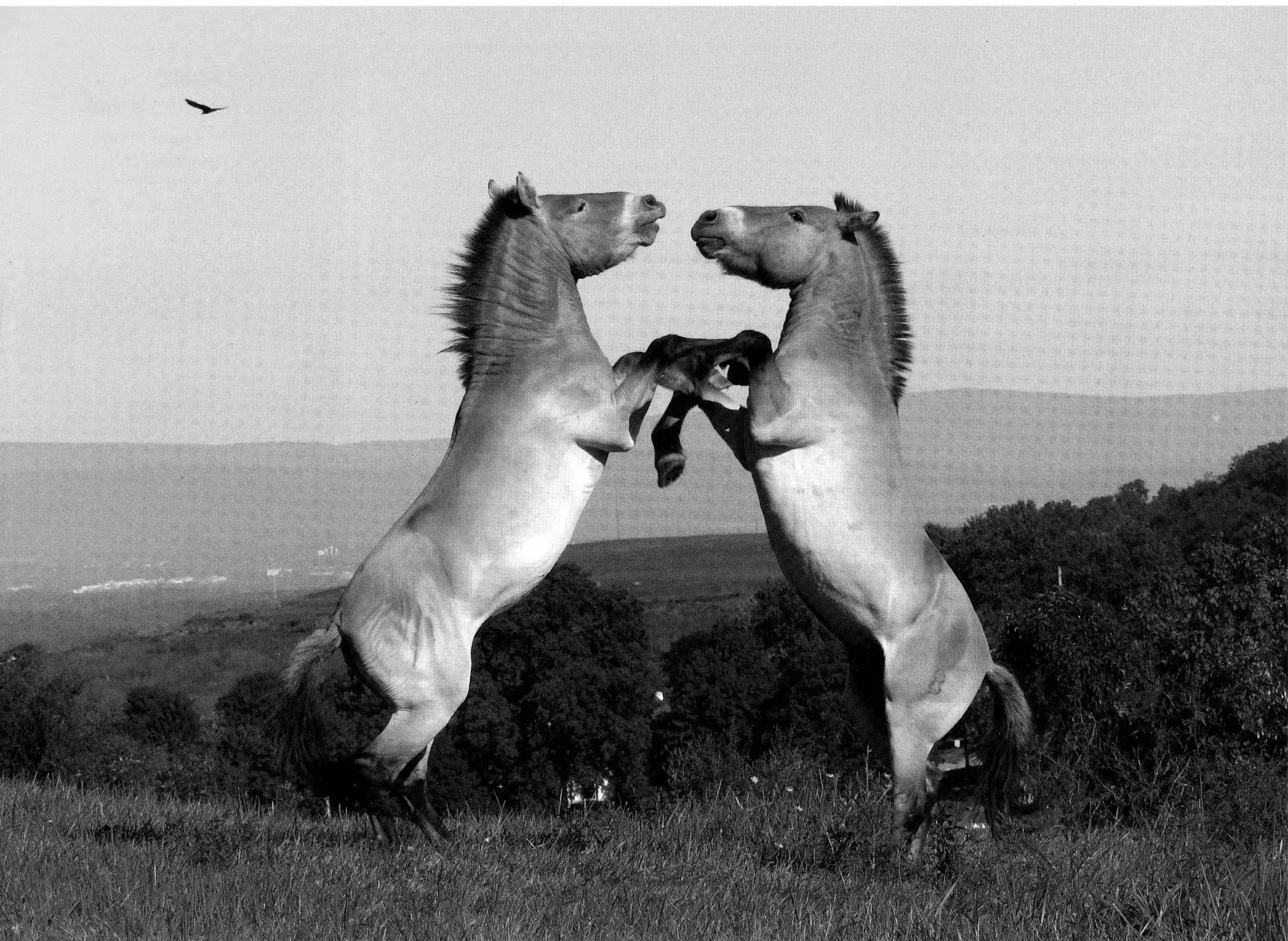
Nominations are due by June 15, 2018, and will be reviewed by the Board of Directors. To learn more and find the nomination form, please visit [fonz.org/board](http://fonz.org/board).

# For people who love animals. And sitting.



Benches are a great way to celebrate people who love the Zoo.  
Order a commemorative bench today at [FONZ.ORG/BENCHES](http://FONZ.ORG/BENCHES)





LAWRENCE LAYMAN/NZP

## P-Horse Pugilists

**Lawrence Layman has been a keeper at SCBI for 16 years.** He currently works at the hoofstock unit, where he cares for animals like zebras, scimitar-horned oryx, and Przewalski's horses, including these two stallions, Agi and Finnegan. The image above shows them when they were juveniles and still housed together. Occasionally they would mock fight, "just like teenage boys," Layman says. (As adults, Agi and Finnegan are now housed separately, because the fighting would get serious.)

The P-horses don't rear up like this every day, or in the same spot, but Layman had a decent idea where they might go when he let them out of the barn one morning. He set up the shot to put the Shenendoah Valley in the background, and as soon as they came out and reared up, he got the shot. (The vulture in the background was a bonus.) His secret to wildlife photography? Patience and a bit of luck. And he doesn't worry about fancy equipment. Mostly he uses a basic \$300 point-and-shoot model. "I'm hard on cameras" he says. "That's all I ever carry."

### Technical Notes

**CAMERA:** CANON POWERSHOT SX510 HS; **ISO:** 80;  
**EXPOSURE:** 1/400 SEC AT F/5.6

### Share Your Photos!

Smithsonian Zoogoer welcomes FONZ members' submissions of photos taken at the Zoo. Please send photos to [Zoogoer@si.edu](mailto:Zoogoer@si.edu) or post to [@FONZNationalZoo](https://twitter.com/FONZNationalZoo) on Twitter, Instagram, or Facebook. Use the hashtag **#WeAreFONZ**. Your photo may be featured on the Zoo View page.

**Join the Club!** Membership in the FONZ Photo Club is open to photographers of all skill levels. The group meets monthly to hear guest speakers and to share and discuss members' work. Learn more at [fonz.org/photoclub](http://fonz.org/photoclub).



# FREE BEER!

*(In exchange for helping to save species)*



**THURSDAY, JULY 19, 2018 | 6:00-9:00 PM**

It couldn't be more fun to support the species-saving efforts of the Smithsonian's National Zoo and Conservation Biology Institute—all you have to do is buy tickets to Brew at the Zoo. That's it! Sample craft beers, enjoy live music, meet animals up close, dance all night, and feel fine in the morning, knowing you supported a good cause. Drink beer. Save wildlife. **Members get early access to discounted tickets on June 7 at [fonz.org/brew](http://fonz.org/brew).** *This is a 21+ rain or shine event. Outside food will not be permitted (unless you're wearing it on a necklace). Sponsored by Macy's, The Whiting-Turner Company, and ZwillGen.*



# FRIENDS OF THE NATIONAL ZOO

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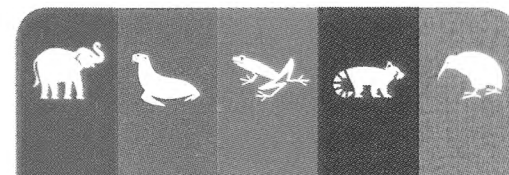


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**ZOO UNCORKED | THURSDAY, SEPTEMBER 13 | 6 TO 9 P.M.**

Raise your glass to conservation at Zoo Uncorked! Join Friends of the National Zoo for an evening of fine wine, exotic animals, live entertainment, and alternative art from GRUMP Market—all in support of the Zoo's mission to save species.

Members receive priority registration and discounted tickets beginning August 2 at [FONZ.org/uncorked](#). Sponsored by Shipt.